June 2020

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COVID-19: DRDO's Contribution



Fri, 19 June 2020

DRL carries out sanitization in banks, ATMs to mitigate COVID-19 in Tezpur

Defence Research Laboratory (DRL), a premier laboratory of DRDO located in Tezpur, has contributed significantly

Tezpur: Defence Research Laboratory (DRL), a premier laboratory of DRDO located in Tezpur, has contributed significantly by carrying out internal sanitization activity in various army and civil establishments to combat COVID-19 pandemic in Sonitpur district.

Soon after the announcement of countrywide lockdown 1.0 due to the COVID-19 pandemic Dr. Sanjai Kumar Dwivedi, Director, DRL, constituted DRL COVID-19 sanitization team comprising of Ashok Naglot, Scientist 'D', Vijay Pal, Senior Technical Assistant 'B' and Nipujyoti Kalita, Technician 'C' (Photographer) to carry out the internal disinfectant activity with the WHO recommended disinfectants in various



government departments which approached DRL for conducting sanitization activity in their respective premises.

On the request of General Manager, State Bank of India, Regional Business Office, Tezpur to sanitize various SBI branches and ATMs within the vicinity of Tezpur, DRL COVID-19 sanitization team recently carried out rigorous internal sanitization process of nine SBI branches, including SBI Mission Chariali, SBI RBO, SBI Tezpur Bazar, SBI Chandmari Tezpur, SBI Balipara, SBI Rangapara, SBI Khelmati, SBI Teligaon and SBI Tezpur Medical College, and 15 SBI ATMs. The DRL team mainly focussed on disinfection of the internal areas including entry gates/channels, locks, working tables of the employees, cash/cheque withdrawal and deposit counters, enquiry counters, lockers for keeping files, desktop computer key pads, public sitting chairs, railing of stairs, doors nobs, slabs/racks for keeping files, in-house canteen/dining facilities, guard rooms, main shutter gates, ATM entry gates and ATM key pads of the respective of the SBI branches. The DRL team also advised bank officials to use sponge cups saturated with alcohol based sanitizer while dealing with files and cash to minimize the risk of COVID-19 infection. In addition, the team also recommended the officials to keep disinfectant saturated carpet/jute mat at the entry point for sanitization of shoes sole while entering the office premises.

The DRL COVID-19 sanitization team also suggested the bank managers of respective branches to sanitize their internal areas every evening after the office hours to mitigate COVID-19 spread. https://www.sentinelassam.com/north-east-india-news/assam-news/drl-carries-out-sanitization-in-banks-atms-to-mitigate-covid-19-in-tezpur-483434?infinitescroll=1

The Statesman

Fri, 19 June 2020

Covid-19: With capacity to produce over 5 lakh PPE a day, Punjab seeks permission for export

As there was shortage of PPE in the country and abroad, the apparel industry in Punjab has shifted to the business and got due approvals from SITRA and DRDO

Chandigarh: With 128 Punjab manufacturers approved for production of Personal Protection Equipment (PPE), Chief Minister Amarinder Singh on Thursday sought Prime Minister Narendra Modi seeking permission to export the surplus.

In a letter to PM, the CM said these manufacturers had risen to the occasion in the wake of the Covid outbreak to make Punjab self-reliant in the manufacture of this critical equipment needed by frontline warriors in the fight against the pandemic.

Permitting them to export the PPE body coveralls "would also give an impetus to the Atma Nirbhar Bharat Abhiyan (self reliant Indian campaign) recently launched by Union government under your leadership," he said in his letter to the PM, requesting him to consider giving permission" for the same.



(Representational image: iStock)

Citing the surplus capacity of production and quality of products manufactured by these units, which started production after obtaining certification from South India Textiles Research Association (SITRA) or Defence Research and Development Organisation (DRDO), Amarinder said it appeared that there was not enough domestic demand of PPE at present.

These manufacturers are finding it difficult to obtain orders from HLL, he pointed out, adding that of the 128 approved manufacturers, only 18 units have received orders from the Union government.

Of the 128 approved manufacturers, most of which are based in the leading textile hub Ludhiana, have a cumulative current capacity to manufacture 5,21,050 PPE coveralls every day.

Besides, with the manufacturers possessing significant ability to further scale up the total capacity, the potential for exports is massive, according to additional chief secretary Vini Mahajan, who pointed out that permission to export would not only help revive the state's industry but also support the global battle against the Covid pandemic.

As there was shortage of PPE in the country and abroad, the apparel industry in Punjab has shifted to the business and got due approvals from SITRA and DRDO.

The Centre has banned PPE exports as there was shortage of the same within the country. But as the PPE kit manufacturing capacity has gone up much above the domestic demand, the apparel industry is hoping for the Centre to allow export of PPE which will help them get business in the international market currently dominated by China, Bangladesh and Vietnam.

https://www.thestatesman.com/cities/chandigarh/covid-19-capacity-produce-5-lakh-ppe-day-punjab-seeks-permission-export-1502901296.html

DRDO Technology News

THE FINANCIAL EXPRESS

Fri, 19 June 2020

IAF Sukhoi-30 MKIs get big firepower! BrahMos air version can now be used in combat; gets critical certification

To be integrated on the Su-30 MKI, the BrahMos underwent several critical changes including weight reduction from the original 2.9 to 2.5 tonne By Huma Siddiqui

Amidst the ongoing tensions between India and China, the Indo-Russian BrahMos air-launched cruise missile (ALCM) has received its first-ever Fleet Release Clearance (FRC) which has been issued by the Centre for Military Airworthiness and Certification (CEMILAC).

Sources at BrahMos have confirmed to Financial Express Online that, the FRC certification was issued by the CEMILAC on June 10th in Bengaluru. This was shared with all the stakeholders through a video conferencing where the Defence Research and Development Organisation (DRDO), BrahMos Aerospace, Aircraft and Systems Testing Establishment (ASTE), Software Development Institute (SDI), IAF HQ and other were present.



BrahMos is the first indigenous supersonic and advanced ALCM system made in India in a joint venture with Russia which has this certification. This has the proven capabilities for the Indian Air Force.

Why is this **BrahMos on Sukhoi-30 MKI certification important?**

Explaining the importance of this certification, a senior IAF officer said "With the FRC, the IAF Squadrons can now use these missiles in combat missions. It must be mentioned that the IAF had earlier this year added unmatched capability (as has been reported by the Financial Express Online earlier) when it had inducted the Su-30 MKI which were armed with the BrahMos ALCMs in the resurrected No 222 Squadron at Thanjavur Air Force Station."

This has given the IAF more advantage during its missions in the Indian Ocean Region as the BrahMos stand-off distance is around 300 km and the Su-30 MKI is 3000 km, which also has the capability of being refuelled during a mission.

According to sources, FRC is a critical certification for all who are into missile programmes as based on this can the weapon be used during a mission.

Before the BrahMos was inducted in the IAF it had successfully demonstrated its land-attack and anti-ship capabilities which were carried out on land-based launchers as well as Su-30MKI.

The Journey so far

Since June 2001, besides the developmental launches, the Indo-Russian BrahMos Missile has been launched 26 times from different naval platforms; there were 23 test launches for the Indian Army and six for the IAF.

To be integrated on the Su-30 MKI, the BrahMos underwent several critical changes including weight reduction from the original 2.9 to 2.5 tonne.

What is FRC?

In simple term, it is just like the Initial Operational Clearance which the indigenous LCA 'Tejas' got before it flies. And in the case of a missile like the BrahMos, this kind of certification is required as it has to be cleared and certified since both the weapon and the aircraft platform/or any other platform which will carry have to go through changes.

According to senior IAF officer, "Even the Su-30 MKI has had to undergo several changes and had to be modified for the integration of the missile.

For the certification issued earlier in the month only some of the modified Su-30 MKI has been identified which will carry the BrahMos ALCM for missions.

For future missions, the IAF will be studying and analyzing more data for future missions.

As in the case of the Tejas, which after IOC had to get FOC, similarly, the BrahMos too will have to get another FRC, while the IAF will identify more Su-30 MKI which will have to undergo modifications to carry this missile.

https://www.financialexpress.com/defence/iaf-sukhoi-30-mkis-get-big-firepower-brahmos-air-version-can-now-be-used-in-combat-gets-critical-certification/1996206/

Defence News

Defence Strategic: National/International

hindustantimes

Fri, 19 June 2020

India confirms participation in trilateral with China and Russia on June 23

India has lodged a strong protest with China over the violent clashes in the Galwan Valley in Ladakh on Monday night

By Abhinav Sahay

New Delhi: India on Thursday confirmed its participation in the meeting of foreign ministers of the RIC grouping comprising Russia, India and China to be held on June 23. External affairs ministry spokesperson said that Union minister S Jaishankar will represent India in the trilateral.

Doubts over India's participation in the meeting in the wake of deaths of 20 Indian soldiers in a violent clash between Indian and Chinese soldiers in eastern Ladakh had been removed on Wednesday when Russia declared that a virtual meeting of foreign ministers of the RIC grouping will be held on June 22.

Russia had recently taken the initiative to organise the virtual meeting this month, as first reported by HT on June 13.

"A video conference of the foreign ministers of the three countries is planned on June 23," Russian foreign ministry spokesperson Maria Zakharova told a media briefing.



Indian External Affairs Minister S Jaishankar will attend the RIC meeting also involving China and Russia. (AP Photo)

The border stand-off with China which has resulted in India warning Beijing of a serious impact on bilateral ties, is not on the agenda of the RIC meeting since the grouping, by convention, doesn't take up bilateral issues.

"During this, the ministers will exchange their views on global political, economic and financial trends following the [Covid-19] pandemic as well as the opportunities for cooperation to overcome this existing crisis," Maria Zakharova said, providing a broad outline of the discussions.

The situation in Afghanistan and regional connectivity projects such as the International North South Transport Corridor involving India, Russia and Iran are expected to figure in the agenda.

MEA spokesperson Anurag Srivastava on Thursday also said that India expects the Chinese side to restrict its activities to the Chinese side of LAC. The message is consistent with India's allegations that the clash on Monday was a direct result of Chinese soldiers attempting to erect a structure on the Indian side of the LAC in violation of the June 6 agreement reached between the commanders of the two sides.

https://www.hindustantimes.com/india-news/india-confirms-participation-in-trilateral-with-china-and-russia-on-june-23/story-3XhKZ7rSAXI0ZNIJ5lkpiJ.html

ThePrint

Fri, 19 June 2020

Navy sends more ships from Eastern fleet for deployment in Indian Ocean region

The Eastern and Western Naval Commands are in a 'heightened state of alertness', which means ships can be deployed on short notice

By Amrita Navak Dutta

New Delhi: Amid tensions with China along the Line of Actual Control (LAC) in Ladakh, the Indian Navy has sent out additional ships from its Eastern fleet for deployment in the Indian Ocean Region, ThePrint has learnt.

The move comes at a time when India has put its military machinery on high alert following the deadly clash in the Galwan Valley late Monday evening that led to the deaths of 20 Indian soldiers.

Defence sources told ThePrint that apart from ships that are routinely at sea on various missions, the Navy has instructed other ships to sail out. The sources did not reveal the number of ships, or where they have moved, or for what purpose.



Representational image of Indian Navy ships | Photo: Commons

However, they did say both the Eastern and Western naval commands are in a "heightened state of alertness" — which means ships can be deployed on short notice for operations.

The Print reached the Indian Navy for comment through calls and text messages Wednesday, but is yet to receive an official response.

'More ships than normal'

A source confirmed that the number of ships now operationally deployed is "more than normal".

"Also, there are various fleet exercises at sea during peacetime, and their deployment is such that they can always turn around and be operationally available when needed," the source said.

For instance, after the Balakot air strikes, the Navy, which was carrying out a major theatre level exercise (TROPEX), was immediately deployed in an operational role in the northern Arabian Sea.

The decision to raise the alert level of the three forces were taken at a high-level meeting held by Defence Minister Rajnath Singh with Chief of Defence Staff Gen. Bipin Rawat and the three service chiefs Tuesday, following deliberations held at the level of the Prime Minister Narendra Modi.

https://theprint.in/defence/navy-sends-more-ships-from-eastern-fleet-for-deployment-in-indian-ocean-region/444178/

hindustantimes

Fri, 19 June 2020

No soldiers missing after Galwan Valley clash, says Indian Army

The statement came on a day Indian and Chinese delegations, led by major general-ranked officers, met in eastern Ladakh to defuse mounting tensions between the border troops

By Rahul Singh

New Delhi: The Indian Army on Thursday rubbished media reports that claimed several soldiers had gone missing after the June 15 violent clash with Chinese troops in eastern Ladakh's Galwan Valley along the Line of Actual Control (LAC), in which 20 Indian soldiers were killed and China also purportedly suffered casualties.

"It is clarified that no Indian troops are missing in action," the army said in a brief statement.

An army spokesperson said the statement was in reference to the article, "In China-India Clash, Two Nationalist Leaders with Little Room to Give", published by the New York Times on Wednesday.

Some sections of the Indian media had also reported that several Indian troops had gone missing or were unaccounted for.

The statement came on a day Indian and Chinese delegations, led by major general-ranked officers, met in eastern Ladakh to defuse mounting tensions between the border troops.

This was their seventh meeting after the current border stand-off began and the third after the brutal Galwan Valley clash.

Major General Abhijit Bapat, commander of the Karu-based HQs 3 Infantry Division, and his Chinese counterpart held talks at the site of the clash near Patrol Point 14, where the Indian Army suffered its first casualties in a border skirmish with the People's Liberation Army (PLA) in 45 years.

In October 1975, Chinese troops had ambushed an Indian patrol in Arunachal Pradesh's Tulung La sector and shot four soldiers dead.

The June 15 clash left 76 Indian soldiers injured, including 18 with serious injuries, officials said adding that all of them were stable now.

The troops have since disengaged, the Indian Army said in a statement on Tuesday, confirming the number of dead at 20.

Indian Army officials claimed 43 Chinese were killed or seriously injured, citing radio intercepts and other intelligence.

The Chinese fatal casualties reportedly include a colonel-ranked officer, but HT couldn't independently verify this.

The June 15 brawl has virtually derailed the de-escalation plans worked out by senior Indian and Chinese military commanders in a rare meeting on June 6.

<u>https://www.hindustantimes.com/india-news/there-are-no-indian-troops-missing-in-action-indian-army/story-L7pvc0HiCDqFBagiihcXTK.html</u>



Fri, 19 June 2020

Navy's P-8I sported flying over Ladakh after clashes with Chinese Army

By Raunak Kunde

Indian Navy's P-8I Poseidon anti-submarine warfare aircraft was sported flying over Union Territory Ladakh possibly to carry out surveillance on the movement of Chinese troops in the area. P-8I aircraft are the most potent platform to carry out surveillance, be it sea or mountains. The aircraft can feed live-streaming data.

P-8I is equipped with a CAE Inc. (formerly Canadian Aviation Electronics) developed AN/ASQ-508A advanced integrated magnetic anomaly detection (MAD) system and a Griffon Corporation Telephonics APS-143C(V)3 multi mode aft radar. P-8I also played a vital role after the Pulwama terror attack last year and was deployed in Doklam (during the face-off)



with Chinese forces in the Bhutanese Territory, which had impressed Indian Army about it capabilities for the first time.

The P-8I, based on the Boeing next-generation 737 commercial airplanes, is a variant of the P-8A Poseidon used by the US Navy. In 2016, the defence ministry had placed a follow-on order for four additional P-8I, India will be getting four more P-8I anti-submarine warfare aircraft for its western from July onwards.

https://idrw.org/navys-p-8i-sported-flying-over-ladakh-after-clashes-with-chinese-army/#more-229403



Fri, 19 June 2020

Amid row with China, IAF pushes proposal for acquiring 33 new Russian fighter aircraft

The proposal includes the acquisition of 12 Su-30 MKIs that would be required for replacing the number of aircraft lost by the Air Force in different accidents

New Delhi: Amid the ongoing row with China in eastern Ladakh, the Indian Air Force (IAF) has pushed a proposal to the government for acquiring 33 new fighter aircraft, including 21 MiG-29s and 12 Su-30MKIs from Russia.

"The Air Force has been working on this plan for some time but they have now fast-tracked the process and the proposals expected to be worth over Rs 6,000 crore would be placed before the Defence Ministry for its final approval next week at a high-level meeting," government sources told *ANI* here.

The proposal includes the acquisition of 12 Su-30 MKIs that would be required for replacing the number of aircraft lost by the Air Force in different accidents, they said.

India had placed orders for 272 Su-30 fighter jets over a period of 10 to 15 years in different batches and senior officers feel that the number of planes acquired so far would be enough for the service's heavy-weight aircraft requirement.

The 21 MiG 29s that the IAF is planning to acquire are from Russia which has offered to sell these planes to help the Air Force to meet its requirement of new fighters.

The Air Force has also carried out a study to check if the airframe of the MiG-29s on offer are good enough for it to operate for a long time and they have been found to be in almost new condition.

MiG-29s are flown by the Air Force and the pilots are familiar with it but the ones offered by the Russians are different from the ones in the Indian inventory.

The Air Force has three squadrons of the MiG-29s which have been undergoing upgrades for extended life and are considered reliable in the air defence roles.

India and China have been locked in a dispute after the Chinese troops carried out military build-up along the Line of Actual Control in Eastern Ladakh, where they have deployed over 10,000 troops.

https://www.timesnownews.com/india/article/amid-row-with-china-iaf-pushes-proposal-for-acquiring-33-new-russian-fighter-aircraft/608474



Fri, 19 June 2020

चीन से जारी विवाद के बीच एयरफोर्स ने सरकार को भेजा रूस से 33 नए एयरक्राफ्ट खरीदने का प्रस्ताव

By Himanshu Jha

नई दिल्ली: पूर्वी लद्दाख में चीन के साथ जारी तनाव के बीच भारतीय वायुसेना ने 33 नए एयरक्राफ्ट खरीदने के लिए सरकार को एक प्रस्ताव दिया है। इनमें रूस के 21 मिग-29 और 12 Su-30MKI एयरक्राफ्ट शामिल हैं। सरकारी सूत्रों ने कहा कि वायुसेना इसके लिए बीते कुछ दिनों से काम कर रही थी, लेकिन अब इसे गति दी गई है। एयरक्राफ्ट खरीदने में 6000 करोड़ रुपए की लागत आएगी। अगले सप्ताह इसके प्रस्ताव रक्षा मंत्रालय को दिए जाएंगे.

सूत्र ने बताया कि प्रस्ताव में 12 Su-30 MKI का अधिग्रहण शामिल है, जो विभिन्न दुर्घटनाओं में वायु सेना द्वारा गंवाए विमानों की जगह लेगा। भारत ने अलग-अलग बैचों में 10 से 15 साल की अविध में 272 Su-30 फाइटर जेट्स के ऑर्डर दिए थे। विरष्ठ अधिकारियों को लगता है कि, विमानों की यह संख्या भारी-भड़कम सर्विस के लिए प्रयाप्त है।

भारतीय वायुसेना जो 21 मिग 29 का अधिग्रहण करने की योजना बना रही है, वे रूस के हैं। इसने वायु सेना को नए लड़ाकू विमानों की आवश्यकता को पूरा करने में मदद करने के लिए इन विमानों को बेचने की पेशकश की है। वायु सेना ने यह जांचने के लिए एक अध्ययन किया है कि क्या ऑफर पर मिग -29 के एयरफ्रेम लंबे समय तक काम करने के लिए पर्याप्त है और वे लगभग नई स्थिति में पाए गए हैं।

मिग -29 को वायु सेना द्वारा उड़ाया जाता है और पायलट इससे परिचित होते हैं, लेकिन रूस द्वारा दी जाने वाली पेशकश अलग है। वायु सेना के पास मिग-29 के तीन स्क्वाड्रन हैं जिसको अपग्रेड करने की आवश्यक्ता है।

https://www.livehindustan.com/national/story-amid-row-with-china-indian-air-force-pushes-proposal-for-acquiring-33-new-russian-fighter-aircraft-3289651.html

hindustantimes

Fri, 19 June 2020

'LAC holds no sanctity for Chinese army', Says General Ved Prakash Malik

As New Delhi weighs its response, a defining marker of the Ladakh face-off, according to General Ved Prakash Malik, former chief of the Indian army, is that the military-level engagement on the long-contested Line of Actual Control, premised on a series of bilateral agreements and protocols, has ceased to be a dispute resolution mechanism By Ramesh Vinayak

Chandigarh: The savage killing of 20 Indian soldiers by the Chinese military in the deadliest border clash in last four and a half decades has dramatically spiked tensions between the two nuclear-equipped neighbours.

As New Delhi weighs its response, a defining marker of the Ladakh face-off, according to General Ved Prakash Malik, former chief of the Indian army, is that the military-level engagement on the long-contested Line of Actual Control, premised on a series of bilateral agreements and protocols, has ceased to be a dispute resolution mechanism. In an interview on Wednesday with Executive Editor Ramesh Vinayak, Gen Malik, who Chinese checkers: General VP Malik forsees led India's decisive victory against Pakistani intrusion in Ladakh, Sikkim and Arunachal. (Keshav the 1999 Kargil war, analysed India's options, the geo- Singh/HT file photo)



increased military activities of China in

strategic portents in the escalation on the eastern frontiers and the road ahead in fraught Sino-India ties. Excerpts:

O. What is your reading of the deadly clash between Indian and Chinese soldiers in Ladakh? What makes it an extraordinary escalation?

Two facts stand out from the present face-off: (a) the People's Liberation Army (PLA) encroachment across the Line of Actual Control (LAC) in Galwan Valley and in the disputed area of Fingers, North of Pangong Tso has been a well-planned military activity (b) military-level dialogue and understanding on the LAC has no sanctity for the People Liberation Army of China. This military action has eroded whatever 'confidence' that was created with China at the military level, and trust at diplomatic and political levels.

Q. From the defence standpoint, what are the most crucial consequences of the "violent face-off" in the Galwan Vallev?

Despite several agreements and protocols, special representative- level talks and political summits to maintain peace and tranquillity along the LAC, the number of PLA attempts to encroach upon undisputed/disputed territories have increased. The level of violence from scuffles to stone pelting and use of nails-embedded wooden clubs to kill opponent soldiers have increased. I foresee larger deployment of troops on both sides along the LAC to ensure security of our territory and assets. This will also require urgent improvement of military infrastructure to sustain troops deployed.

Q. What do you see as the tactical and strategic objectives of China's multiple and indepth transgressions and holding the ground in what India has so far seen as its side of Line of Actual Control?

China under President Xi Jinping is committed to retake all territories which it perceives to have belonged to China in the past. Its attempts to execute salami slicing or creeping encroachments avoiding major escalation ('lull the political adversary to comfort level before striking at military

level') will continue. We can expect more such military level activities, particularly in Ladakh, Sikkim and Arunachal Pradesh.

Reports suggest that intelligence agencies had red flagged the PLA troops' unusual build-up at multiple points along LAC by April before their ingress and occupation of roughly sixty square km of what was so far an Indian-patrolled areas in Galwan Valley and Pangong Tso. Did our side lower the guard? Or, were we taken by surprise?

I have no knowledge of such an intelligence report from any source.

Q. Do you think our military response on the ground was adequate and effective enough to countervail the Chinese intrusion?

As per past practices in Demchok, Depsang, Chumar areas in Ladakh and in Dokalam, the effort at military and diplomatic levels was to defuse and disengage. This has been the government's policy and the usual response to maintain peace and tranquillity and avoid violent escalation. The army has gone as per those policy guidelines. These guidelines may change hereafter.

Q. Now that China has aggressively attempted to redefine the LAC at strategic stretches and staked claim on the Galwan Valley that was so far seen to be on the Indian side, what options India has for restoration of status quo ante (before April) and counter China's playbook of redrawing the LAC on ground while keeping its aggression below the threshold of actual conflict?

While the armed forces have to be prepared for any military escalation, it is for the cabinet committee of security to consider wider geo-political and strategic aspects and then give further directions. I think the government will now explore diplomatic and political level possibilities to get the encroachments vacated before going in for escalation.

Q. Is a localised military response still one of options?

I believe any military-level dialogue at this stage is unlikely to produce desired results. It has to be tackled at diplomatic and political level now. However, with prevailing tension and anger among troops who are in eye ball to eye ball situation, a violent escalation cannot be ruled out. The armed forces have to remain extra alert for any military action.

Q. In view of Indian army sustaining unprecedented fatalities on the Chinese front, what in your assessment are the chances of things flaring up militarily along LAC?

I do not expect the situation will develop into a full-fledged war or even major skirmishes along the length of our border. It is likely to remain localised. That, however, does not mean that we should become complacent militarily or politically.

Q. Given that Monday's clashes happened during "disengagement" agreed upon by senior military commanders of both sides, do the bilateral dispute resolution protocols/agreements still hold good for defusing the local stand-offs? Have these mechanisms failed? Is it time to relook at them?

Yes! My answer to Q 1 makes it clear. More importantly, we must not allow our troops to get into 'unarmed' or 'scuffle' situations. A new SOP will be required for patrolling on the ground and for any flag meetings.

Q. Amid a heightened antagonism and mistrust between India and China, what will be the most important geo-strategic consequences of a tense LAC for India vis-à-vis Pakistan?

Pakistan may attempt to intensify (a) its sponsored terrorist activities in J&K, and (b) ceasefire violations along the LoC and AGPL. India has the capability to handle any such escalations

Why it is crucial to resolve or freeze the border dispute with China?

The border dispute must be resolved peacefully or frozen till both nations can find a peaceful solution. That way both nations will be able to contribute towards peace, tranquillity and prosperity of Asia and also improve the quality of life of their people.

Q. Is a two-front scenario now more real than ever before?

Unless the border dispute is resolved peacefully, such a possibility in the North West part of India cannot be ruled out in the middle distant horizon.

Q. Do you see any parallel between Pakistan's intrusion of Kargil in 1999 and China's intrusion in Ladakh?

No. Pakistani military and political objectives in Kargil were much larger. It became a limited war situation. Present Chinese intrusion in Ladakh, unless it escalates further, cannot be compared to Kargil conflict. Given the complexity and high-level bilateral and multilateral interaction (including security) between India and China, the stakes in any India-China conflict, whether large scale or limited, will be much higher.

Q. What does the Ladakh 2020 tell us about the strategic lessons that India learnt or hasn't learnt fully from the Kargil 1999?

As I said, there are no comparisons. The Chinese political and military strategies are of different style. We have to study them carefully. At the military tactical and operational level, the only thing common is high-altitude mountain warfare. In that respect, our troops are better skilled and have greater adaptation.

https://www.hindustantimes.com/india-news/lac-holds-no-sanctity-for-chinese-army/story-tcTmHOhLHqUwMab7QnbQbJ.html

TIMESNOWNEWS.COM

Fri, 19 June 2020

Indian Army a notch above China's PLA in high-altitude regions, Chinese Himalayan bases vulnerable: Report

Recent studies have pointed out that India has a huge advantage over the People's Liberation Army of China in high-altitude mountain terrains in the Himalayas Key Highlights

- China is ramping up its arsenal faster than India, with Beijing in just the past year adding 40 warheads as compared to New Delhi's 10
- In 1962, India and China engaged in a bloody war, resulting in a victory for the Chinese military and Beijing securing de-facto control over Aksai Chin near Ladakh before declaring ceasefire

Washington DC: As Indian and Chinese armies exchange physical and verbal blows along and over the Line of Actual Control, a quick analysis of the military prowess of both countries shows that our country is far more superior on the turf where the Chinese are provoking the Indian Army.

While conventionally the Chinese have a bigger advantage as far as military manpower is concerned, recent studies have pointed out that India has a huge advantage over the People's Liberation Army of China in high-altitude mountain terrains.

The study was conducted by the Center for a New American Security in Washington, as per *CNN*.

In 1962, India and China engaged in a bloody war, resulting in a victory for the Chinese military and Beijing securing de-facto control over Aksai Chin near Ladakh before declaring ceasefire.



The month-long war claimed the lives of about 700 Chinese soldiers, and approximately twice that number on the Indian side.

However, things are different now. Both the countries are nuclear powers, and as per the Stockholm International Peace Research Institute (SIPRI), China has roughly 320 nuclear warheads and while India has 150.

China is also ramping up its arsenal faster than India, with Beijing in just the past year adding 40 warheads as compared to New Delhi's 10.

A peek into the LAC region and military establishments of both countries shows that India has an upper hand with 270 fighters and 68 fighter ground attack aircraft compared to China's 157 fighters and a smaller fleet of ground attack drones.

"The high altitude of Chinese air bases in Tibet and Xinjiang, plus the generally difficult geographic and weather conditions of the region, means that Chinese fighters are limited to carrying around half their design payload and fuel. To weather a potential PLA attack, India has placed greater emphasis on infrastructure hardening, base resiliency, redundant command, control, and communications systems and improved air defence," the report stated, according to *IANS*.

India built up its bases in the area with China in mind, as per a report by the Center for a New American Security in October 2019.

The latest study showed that China, that also faced threats from the United States on its eastern and southern flanks, has bolstered its bases there, neglecting the Himalayas. This has left at least 4 PLA airbases too vulnerable.

"Recent conflicts with Pakistan give the current IAF a level of institutional experience in actual networked combat," the study further claimed.

https://www.timesnownews.com/india/article/indian-army-a-notch-above-china-s-pla-in-high-altitude-regions-chinese-himalayan-bases-vulnerable-report/608499



Fri, 19 June 2020

The next few days are going to be stormy for India and China say a former diplomat and retired lieutenant general

By Prabhjote Gill

- Former diplomat Rajiv Bhatia believes that neither side wants a "real escalation in terms of military conflict."
- Using its diplomatic toolkit, India could delay the Russia-India-China (RIC) meeting scheduled for June 23 and convene a special QUAD meeting instead to send a strong signal.
- The current conflict could strengthen the ties between the QUAD members India, US, Japan and Australia since all of them have been the target of Chinese aggression.

Public pressure is mounting on both sides as India and China remain locked in conflict along the Line of Actual Control (LAC) in the Galwan Valley.

Even after a telephonic conversation between India's Foreign Minister Subrahmanyam Jaishankar and his Chinese counterpart Wang Yi, a lot remains up in the air. "The next few days are going to be stormy," former diplomat and distinguished Gateway House fellow, Rajiv Bhatia told Business Insider India.

Agreeing with him, Retired Lieutenant General DS Hooda — who was the Northern Army Commander during the surgical strike against Pakistan in September 2016 — told HW News "We're in for some very tough and hard negotiations."

Amid the rising tensions, the Russia-India-China (RIC) meeting is scheduled for June 23. While India doesn't wish for armed conflict, it could send a strong signal by delaying the conference. "Delhi should actually postpone the RIC meeting and call a convene special QUAD meeting, which will send a very clear signal to our friends in Beijing," suggests Bhatia.

According to him, India's international connections are strong and Prime Minister Narendra Modi has invested a great deal in partnership around the world — and now would be the time to bank on that goodwill.

The difference in perception of what happened on June 15

The Indian side has unequivocally said that the Chinese attack was "premeditated and planned" resulting in the death of 20 Indian soldiers. China, on the other hand, believes that India needs to "control its frontline troops."

"The Indian unit went to check whether the particular part had actually been vacated by the Chinese," said Bhatia. He explains that when the military actually reached the location instead of finding empty barracks — the troops were ambushed instead.

Nobody wants another India-China war

The statement issued by India's Foreign Ministry indicated that the "violent face-off" on June 15 will "have a serious impact on the bilateral relationship." On the other hand, China's Foreign Ministry has asked India to "immediately cease all provocative actions."

But, one thing that both sides have agreed on is that things need to de-escalate. "We would just have to stick to a rational view and presume that neither side wants a real escalation in terms of military conflict across the border," said Bhatia.

However, since the agreement reached on June 6 didn't hold and the foreign ministers were unable to reach a total reconciliation — the level of diplomatic parlays now needs to be escalated to special representatives, which would involve Wang from China's side and national security advisor AK Doval on India's behalf.

"I don't think we'll get a solution out of military-to-military dialogue," said Hooda even though another attempt is set to take place today on June 18 at 10:30 am at a Major General-level to resolve the issues related to the violent face-off in Galwan area on June 15 according to Indian Army sources that spoke to ANI.

"Solutions will have to be found in the diplomatic and political sphere," he explains that for militaries, on the ground, it's unlikely that either side will step back that when it's about territory.

"China will inform some of their key friends like Russia and we'll be doing the same with our QUAD partners and ASEAN. In our own neighbourhood, of course, we probably aren't going to brief Nepal and Pakistan," explained Bhatia. He adds that the current crisis could strengthen the solidarity between the QUAD countries — India, US, Japan and Australia — because all of them "are victims of Chinese aggression,"

According to him, it will be a couple of days of back-and-forth between India and China before the special representatives reach a consensus.

https://www.businessinsider.in/defense/news/the-next-few-days-are-going-to-stormy-for-india-and-china-says-a-former-diplomat-and-retired-lieutenant-general/articleshow/76438507.cms

BusinessLine

Fri, 19 June 2020

Indian intelligence agencies flag over 50 Chinese apps including TikTok: Report

By Himani Seth

Mumbai: Indian intelligence agencies have red-flagged 52 mobile apps with 'links to China' over security concerns according to media reports.

The agencies have asked the government to either block these apps or issue advisory to stop people from using these apps over safety concerns. According to the agencies, these apps end up

extracting a large amount of data from Indian users and send it to servers outside the country, Hindustan Times reported.

The National Security Council Secretariat has recently supported the list, the report said.

The list of apps popular video-sharing app TikTok, file sharing app Xender and SHAREit. It also includes a list of apps from one of India's most popular smartphone brand, Xiaomi- Mi Community, Mi Store, Mi Video call-Xiaomi.

Apart from this, it also includes Clash of Kings, SHEIN, UC Browser, 360 Security, APUS Browser, Baidu Map, Baidu Translate, BeautyPlus, Bigo Live, CacheClear DU apps studio, Clean Master – Cheetah, ClubFactory, CM Browser, DU Battery Saver, DU Browser, DU Cleaner, DU Privacy, DU recorder, ES File Explorer, Helo, Kwai, LIKE, Mail Master, NewsDog, Parallel Space, Perfect Corp, Photo Wonder, QQ International, QQ Launcher, QQ Mail, QQ Music, QQ NewsFeed, QQ Player, QQ Security Centre, ROMWE, SelfieCity, SHAREit, UC News, Vault-Hide, Vigo Video, Virus Cleaner (Hi Security Lab), VivaVideo- QU Video Inc, WeChat, Weibo, WeSync, Wonder Camera, Xender and YouCam Makeup, News18 reported.

The list also includes Zoom which had been flagged by the Union Home Ministry that had issued an advisory against the app earlier this year. Zoom had said that they had been in discussion with the government and were bullish on security for the app as per previous reports.

Apart from this, Chinese smartphone brand Xiaomi has also been flagged in the past over data security concerns.

Back in 2014, the Indian Air Force had sent a circular to its personnel warning them against the use of the device after a security firm had reported that the devices were pre-loaded with software to spy on users, the New Indian Express had reported. Furthermore, the same year, the company was criticized for sending user data to remote servers in China.

According to a Forbes report last month, Xiaomi had been allegedly recording and sending user data to remote servers according to a recent report by Forbes. The brand had denied any wrongdoing. The brand had said that they had moved their data related to Indian users on local servers back in 2018 as per previous reports.

Officials have argued that there are many mobile applications launched by developers in China that have posed security risks as they have the potential to be used as spyware or other malicious ware as per reports.

Western intelligence agencies have also raised concerns related to China-linked apps over the years.

https://www.thehindubusinessline.com/info-tech/indian-intelligence-agencies-flag-over-50-chinese-apps-including-tiktok-zoom-report/article31857225.ece#

The Tribune

Fri, 19 June 2020

Capitalise on high-altitude air operations

A big blunder in 1962 was not resorting to our superior air power, which we had then in terms of our Hunters and Canberras. The equation has no doubt changed, but India has to be prepared for high altitude operations against the Chinese all across the LAC. Infrastructure has to be built up to enhance our logistic wherewithal in the difficult terrain

By Group Captain Murli Menon (Retd)

In many ways, the ongoing standoff with the Chinese across the LAC reminds us of our bitter experiences of 1962. But there is no excuse to be surprised a second time by a recalcitrant adversary. The manner in which the Galwan debacle played out is uncannily similar to what the Chinese did to the Russians on the Manchurian Ussuri river in March 1969, including the targeting of the commanding officer.

That the Chinese should choose to indulge in such adventurism in the backdrop of the coronavirus pandemic and their own alleged role in creating it is surprising enough. And their ongoing aggressive forays in the South China Sea, Hongkong and Taiwan cannot be entirely

coincidental. Clearly, there is a grand plan in the offing. A supposedly over keen Chinese Communist Party leader or a threatened President Xi Jinping attempting to counter internal ruffles within his establishment only be other contributory factors.

But what India's response needs to be is what should agitate all strategist minds now. Countering the dragon: Air power sensibly employed in the Very clearly, the rules of engagement along mountains could turn the tide in favour of the initiator.



the LAC need redefining. It is ridiculous to think of modern militaries fighting with stones and nailed batons. The basic principle in warfare is to pitch your strength against the enemy's weakness.

In the Galwan valley, the terrain goes up to 15,000 ft AMSL (above mean sea level), with Leh and Thoise airfields being at around 11,000-10,000 ft AMSL and Daulat Beg Oldi (DBO) at 16,614 feet. It is thus going to be a different kind of warfare altogether, something we ought to have equipped and trained for.

Now that both foreign ministers are talking of de-escalation, whilst we go along with any suitable proposals from the Chinese, we have to ratchet up our military's tactical posturing in the area. That would mean the Army deploying troops to occupy advantageous high points and the IAF buttressing its air defence and offensive air support capabilities out of Leh, Thoise and DBO airfields.

A big blunder in 1962 was not resorting to our superior air power, which we had then in terms of our Hunters and Canberras. The equation has changed drastically no doubt, but India has to be prepared for a series of high-altitude operations against the Chinese all across the LAC.

Meanwhile, infrastructure on the ground along the frontage of the LAC has to be expeditiously built up to enhance our logistic wherewithal in the difficult terrain. Though the Chinese may enjoy superiority in numbers, as far as the armies are concerned, we have to capitalise on our profound high-altitude air operations skills, honed since Siachen and Kargil, to smartly employ our air power to advantage against the Chinese. जान प्रसार एवम विस्तार

As and when the likes of S-400 and THAD (terminal high altitude area defence) materialise, they have to be integrated into the air defence of the Leh area. Aircraft of the Mirage and SU30 class with their standoff and PGM (precision-guided munition) capabilities could be effectively employed to provide the force multiplier effect to our ground troops.

Also, our assets such as the new Apache/Chinook helicopters and the C-17/Hercules transporters would find valuable usage in this terrain. Trainer aircraft such as the Hawks and Pilatus would be good platforms to exploit too. The IAF already has high-altitude air ranges located at places such as Kartso, Kargil and Toshi Maidan, which need to be utilised for realistic operational training for weapon delivery and other aerial tactics. Our air power capabilities need to be deployed, albeit in a graded escalatory manner, to bring on unbearable pressure on the enemy.

Should suitable large targets, such as the formation HQ of the PLA or PLAAF, be available, the use of ground- or air-launched Brahmos missiles could also be considered.

One of the classic outcomes of the 'Himalayan blunder' was our government's failure to declassify the Henderson Brooks report into the 1962 war. Had we done that in a timely fashion, many of the challenges of high-altitude warfare would have been addressed by now. But it is better late than never and capabilities have to be put in place forthwith.

Mountain warfare is not only critical for the Indian Army, but also for our air and sea elements. Some sea operations on the Pangong Tso lake could also be envisaged. Air defences need to cater to the Chinese SSM (surfeace-to-surface missile) threat too. High-altitude air warfare has its peculiarities owing to weapon delivery difficulties, aspects such as landslides and avalanches that could be intentionally triggered by air power and challenges in combat search and rescue.

Limitations in line-of-sight considerations for radar sensors and communications, terrain masking and its advantages are some other aspects to be considered. Passive air defence aspects, such as the availability of hardened shelters at Leh, DBO and Thoise, would also need to be addressed. Of course, any action along the LAC could have the possibility of Pakistan opening up a front in the West.

Battle staff management is another important aspect, where our experience in orchestrating the air war from Awantipur during Op Safed Sagar would come in handy. All in all, air power sensibly employed could turn the tide in favour of the initiator. Adaptation to base air defence, such as tactical usage of terrain to deploy mobile observer units, could compensate for ground radar limitations in the mountainous terrain. Recourse to shoulder fireds as opposed to impractical and unwieldy SAGWs (surface-to-air guided weapons) may need to be taken.

Clearly, all air capability for an air campaign in the mountains off Ladakh does not obtain as of now. So, the IAF will have to have a building-block approach to orchestrating any such campaign. But should we be able to pull it off, results in terms of overall campaign objectives would be out of proportion and in our favour.

It behoves the government to give a free reign to the three military chiefs to marshal a befitting tactical response to our land-grabbing neighbour.

https://www.tribuneindia.com/news/comment/capitalise-on-high-altitude-air-operations-101107



Fri, 19 June 2020

Is China overestimating its strength?

By Ravi Shankar

The brutal brawl at Galwan Valley on 15-16 June which led to major casualties on both sides after a gap of around five decades is a steep escalation in India-China military face-offs. The Chinese Communist Party(CCP) is utilising every trick in the book to draw global attention away from culpability for the Wuhan originated COVID-19 pandemic by stoking disputes with countries who are standing upto them. While Taiwan and Australia have borne the brunt of Chinese threats in May 2020, the CCP has now manufactured a crisis with India across the LAC.

The whole world is stunned at the Chinese savagery and deception displayed by its troops using primitive tactics—the PLA troops attacked with stones, iron rods, studded metal clubs, batons with barbed wires. These instruments were used on an unarmed patrol of the Indian Army that had set out to check on the Chinese withdrawing as per an agreement arrived at. Both nations possess nuclear weapons, ballistic missiles, cruise missiles, rocket regiments,



advanced fighter aircraft, attack helicopters, aircraft carriers, submarines, destroyers, frigates, artillery and battle tanks; and yet the Chinese deciding to spill blood with implements like batons and metal clubs is a reflection of their primitive mind-set of utmost savagery and barbarity.

A deeper analysis of the incident brings out some critical facts. To achieve a psychological ascendancy, the mouthpiece of the CCP –*Global Times* published numerous articles alluding to high-altitude manoeuvres by PLA troops, paratroopers and its armoured formations in Tibet. These articles were meant to subdue the Indian Army, and instil fear about what the Chinese could bring

to bear if Indians opt for a bold stance. Chinese military planners are known to follow the old Chinese proverb from the Zhou dynasty – "Kill the Chicken to Scare the Monkey". However, the effort failed to scare none of our troops along the LAC.

There is no gainsaying the fact that China enjoys superiority in comprehensive national power and bean-counting of its armed forces. Conflicts are however rarely decided by the superiority of numbers alone. Three important factors must be considered for any scholarly debate on the issue.

The first is the difference in the political leadership of India of 2020. The second is in the 'intheatre' capability and comparison of troops, as was forcefully driven home by the Vietnamese in their splendid performance vis-a-vis the PLA in 1979.

India is presently led by a popular Prime Minister who enjoys widespread support from the masses and has a clear majority in the Indian Parliament. In contrast, Xi Jinping has carried out a pervasive purge of the CCP, eliminating likely contenders under the garb of anti-corruption drives.

The PLA has augmented-major military and civilian infrastructure throughout Tibet. It includes commissioning of the Qinghai-Tibet railway project in 2006. Taking cognizance of changing dynamics of PLA deployments in Tibet, the Indian Army has commenced building strategic roads along the LAC. The Indian side has also raised new divisions and a Mountain Strike Corps to strengthen its capabilities.

These force accretions have, also, been supported by requisite force multipliers including the 155mm M-777 Ultra-Light Howitzers acquired from the USA and the K-9 self-propelled artillery produced by L&T, an Indian behemoth. More importantly, the Indian soldier is toughened by years of fighting terrorists in difficult terrain and enriched by the experience of wars in1965, 1971and Kargil wars, fought and won against desperate odds. The all-volunteer Indian soldiers are quite confident to handle the present conscript army of the CCP, which has never fired a bullet in anger, post the Sino- Vietnam War. It's always the 'Man behind the Machine' that is the most important factor in combat.

A recent Harvard study on forces arraigned across the LAC brought out that the Indian Air Force holds a distinct advantage over the PLA Air Force (PLAAF) which would be forced to operate from its high-altitude bases in the Tibetan plateau. Atmospheric conditions at such altitudes pose heavy penalties on the all up weight of an aircraft as it takes off. It results in loss of range as also weapon loads that can be carried.

Recent force accretions of the IAF including SU-30sand their forward deployment allows India an edge over the PLAAF assets in Tibet. The future deployment of the newly inducted Rafale fighters would tilt the balance further to India's advantage. In addition, the IAF has also developed credible strategic airlift with the induction of C-130, C-17, and recently the Chinook helicopters, to rapidly mobilise battle-hardened Indian troops to forward bases within hours.

However, the most important facet that has never been lost on the Chinese is that the Indian Navy sits astride the lifeline of their economy. This trade valued in billions of US\$ transits the Indian Ocean Region (IOR) to markets in Europe, Africa and West Asia. Concurrently, 52 per cent of Chinese crude oil imports transit through the sea lanes of the Indian Ocean. Any disruption would inflict a body blow on the already distressed Chinese economy and by extension the fortunes of the CCP. Indian Navy's new logistics agreements with France, USA and Australia etc., give it the flexibility of drawing logistics support at various ports in the IOR.

The Indian Navy also operates with leading Navies of the world in complex multi-lateral exercises like MALABAR, RIMPAC, JIMEX, INDRA and the AUSINDEX. Hence, while the impressive Chinese shipbuilding industry may produce warships in large numbers, but their ability to protect their national interests in the IOR remains quite doubtful.

In a conflict with China, it is apparent that the Indian side has now altered its strategic thinking. Two experts on China, Anit Mukherjee and Yogesh Joshi have recently highlighted in their research paper that the Indian Armed Forces have transformed their strategy to "deterrence by punishment". Hence, while the Dragon could spew some fire, it is quite likely that in a future

conflict with the Indian forces, the punishment it may receive could lead to the Dragon losing much more 'than its face'.

https://bharatshakti.in/is-china-overestimating-its-strength/



Fri, 19 June 2020

Ladakh standoff: India faces cyber attack on two fronts

Amid escalating tensions along the Sino-Indian border, the cyber space has been witnessing a concerted misinformation campaign in recent days aimed at defaming India. A city-based cybersecurity agency, which monitors web activity, found that several hundred fake accounts — most of them from Pakistan — are spreading false information about the actual situation on the Line of Actual Control.

Technisanct, the private cybersecurity firm, found that such activities are carried out through Twitter and Telegram. "Fake profiles are created with Chinese identity and photographs to convince users that the posts are genuine," said. Nandakishore Harikumar, chief executive officer (CEO), Technisanct. Over 500 Twitter handles used to spread the false information have

been identified by Technisanct. "We identified multiple Pak-operated handles that started to change names and translate tweets into Chinese. Most of these accounts create a feeling that Pakistan is highly backed by China," he said.

Nandakishore said he suspects that these accounts are backed by Pakistan's Inter-Services Intelligence(ISI) agency. "Pakistan has been maintaining multiple digital war fronts. The digital warfare had peaked after abrogation of Article 370. Weekly, two trending activities happen against India," he said. The Technisanct team used a platform called Twint and trends map to gather information on the discussions that happened in the aftermath of the Ladakh issue. After observing these Twitter accounts, their followers and past tweets, it became clear that these are operated for creating a pro-Pakistan narrative.

This is organised activity, he said.

For instance, an account named 'YasifXi' from Pakistan which looked like a Chinese account tweeted the photo of two officers from both sides having a conversation with the hashtags #WorldWar3 and #LadakhBorder. From its geographical location, it was established that the tweets were from Pakistan, with a few also from Jammu and Kashmir. Most of the tweets gathered around 1,000 plus retweets and 5,000 plus 'likes' which would have aided in the trend. An official with Kerala Police's Cyberdome said in the past few weeks, there has been a surge in anti-India cyber propaganda. "We can only identify such accounts and report them to Twitter. It is up to Twitter to take down such accounts," he said.

https://idrw.org/ladakh-standoff-india-faces-cyber-attack-on-two-fronts/#more-229430





A new arms race?

The Indian Army stocks up on body protectors and spiked clubs to deal with a medieval adversary on the Line of Actual Control By Sandip Unnithan

A day after the deadly June 15 clash in the Galwan Valley with the PLA in which 20 soldiers were killed, many of them with improvised spike-studded clubs, the Northern Command has begun equipping its soldiers with lightweight riot gear. The body protectors comprise padded polycarbonate inserts and protects wearers from, significantly, sharp objects and stones.

The first consignment of 500 sets of full-body protectors was airlifted from the Mumbai-based supplier to Leh where it is to be distributed among troops deployed along the LAC. One senior military analyst who did not want to be named worried over the optics of kitting the army in riot control gear. "It means changing an armyman's mindset into a policeman's," he says. The army also plans to equip its troops along the LAC with spiked clubs. "We won't be surprised the next time," an army officer said.

Among the deadly weapons used by the PLA troopers in the June 15 ambush were clubs studded with spikes. Indian troops had been surprised last month too when the PLA used clubs wrapped with barbed wire to target Indian troops in skirmishes along the Pangong Lake. Several Indian soldiers had been injured, some of them seriously.

The use of medieval weapons in modern warfare is not entirely uknown—the last century's first mechanised war, World War-I, protector being acquired by the saw Allied powers and the Central powers attacking each other's



Two views of the anti-riot full body Indian Army.

trenches to kill, maim and capture rivals. Among the improvised weapons used then were trench knives—a long knife with a studded metal handguard--and clubs studded with spikes and barbed 레시 기사나 wire designed to inflict grievous bodily harm.

The PLA's spiked clubs killed and maimed Indian soldiers without firing a shot in a way that circumvents a key provision of multiple agreements between India and China. One of the key tenets has been the need to preserve 'peace and tranquility' on the border, interpreted by both sides to mean not using firearms. The last shot was fired on the India-China border 45 years ago when a PLA patrol ambushed a party of Assam Rifles killing four soldiers.

Since the 1993 India-China boundary agreement, firearms are never brandished—the drill is for rifles to be slung on the back with the barrel pointing towards the ground. Previous standoffs between the two sides have seen wrestling bouts and fisticuffs but no weapons fired. A red line was crossed on June 15. On June 16, Prime Minister Narendra Modi suggested retribution. "The sacrifices of our jawans will not go in vain," he told state chief ministers at a video-conference. The standoff promises to be a long-drawn and messy affair.

https://www.indiatoday.in/india-today-insight/story/a-new-arms-race-1690133-2020-06-18



Fri, 19 June 2020

Moscow assures support to India amidst stand off with China

Moscow has assured that it stands by India in thick & thin. Top sources told WION while it supports India, it also backs New Delhi's efforts to resolve issues with China amidst the ongoing stand-off with China. The development comes even has Moscow has publically reacted on the standoff at multiple levels with Russian Deputy Foreign Minister Igor Morgulov & India's Envoy to Russia Bala Venkatesh Varma discussing the matter.

On Wednesday, reactions came from Russian Foreign Minister Sergey Lavrov, the Russian ambassador to India Nikolay R. Kudashev & Russian Deputy Chief of Mission Roman Babushkin on the development hoping for de-escalation.

Lavrov said, "It has already been announced that the military representatives of India and China have made contact, they are discussing the situation, discussing measures to de-escalate it. We welcome this".

Envoy Kudashev in a tweet said, "We welcome all steps aimed at de-escalation at the LAC, including the conversation between the two FMs, and remain optimistic."

While Russian DCM told WION, "We hope that the tensions will soon be de-escalated, and the sides would further maintain a constructive dialogue also keeping in mind the potential of cooperation. Russia believes it is vital for the region".

The Russian readout of deputy Russian foreign minister's talks with Indian envoy to Russia said, "the officials discussed regional security, including developments on the Line of Actual Control on the border between India and China in the Himalayas".

India and Russia have close ties and engage frequently including at the highest level. Both Indian Prime Minister Narendra Modi and Russian President Vladimir Putin have spoken to each other many times this year including on COVID-19 crisis.

Later next week, the RIC Russia-India-China foreign minister meet via video conference will take place.

Russian foreign ministry spokesperson Zakharova announced that "On June 23, foreign ministers of Russia, India & China are scheduled to meet via videoconference as part of Russia's RIC chairmanship. They will exchange views on trends in global politics, the economy, and other areas following the COVID19 pandemic."

Russian envoy called the "existence" of the grouping an "undisputable reality" which is "firmly fixed on the world map". Commenting on "current stage of of the trilateral cooperation" he said, "there are no indications that it might be frozen" over current India-China stand-off.

Later this year as the chair of SCO and BRICS, Russia will host the summits of both the groupings.

Meanwhile, Pakistan's Foreign Minister SM Qureshi also spoke to his Russian counterpart and the Russian foreign ministry readout of the talks showed that Russia did not support Pak priorities as Islamabad had been claiming during the telephone call.

India will send 75 members strong Tri-Service contingent to participate in the 75th Victory Day Parade of World War II in Moscow.

Victory Day Parade is scheduled to be held on June 24, 2020, in Moscow and the Russian Defence Minister Sergei Shoigu had invited Indian contingent to take part.

According to the official press-release of the Russian Ministry of Defense, the mechanized column participating in the parade will consist of more than 200 vehicles with more than 20 types of military hardware showcased at the parade for the first time.

Among the new armoured vehicles will be T-90M main battle tank, Armata infantry fighting vehicle with new combat module Kinzhal, Kurganets-25 infantry fighting vehicle with Epoha combat module.

https://idrw.org/moscow-assures-support-to-india-amidst-stand-off-with-china/

♦The Indian **EXPRESS**

Fri, 19 June 2020

Explained: What is unarmed or hand-to-hand combat for armed forces?

India-China border dispute: The Indian Army is an armed force and its primary emphasis is on training its personnel in the use of weapons By Manraj Grewal Sharma

Ever since the standoff between the Indian and Chinese forces at Galwan on the intervening night of June 15 and 16, television channels have been rife with the term 'hand-to-hand combat' or "gutham-gutha" as commentators described the violent skirmishes between the two forces. The *Indian Express* explains what it means for the Indian armed forces.

The Indian army is an armed force and therefore its primary emphasis is on training its men and women in the use of weapons. Though soldiers are taught unarmed combat as part of various courses, the stress is on weapons training. Besides rifles, carbines and pistols issued to every soldier and officer, an infantry battalion has numerous crew-served weapons like an MMG



AGL(automatic grenade Cadets during an attestation parade in Leh,

(medium machine gun), launcher), missile launchers, rocket launchers, 51mm Saturday, June 13, 2020. (PTI Photo) mortars, 81mm mortars, MGL(multi grenade launcher) etc.

Every soldier and officer is also issued a bayonet along with an assault rifle. He is trained to use the bayonet especially in a close combat situation or during an assault on enemy defences once he comes into close proximity with the enemy.

A rifle, a carbine or a sidearm are issued to soldiers in all units of the army, be it an artillery regiment (which uses long range artillery guns like 105mm field guns, 155mm gun howitzers etc), Armoured regiment (which has tanks), Mechanised Infantry regiment (which has Infantry combat vehicles), Engineer/Signal/Army Air Defence regiments or the logistics units like the Army Service Corps/Army Ordnance Corps/Electrical and Mechanical Engineering Corps etc.

With increasing modernisation, training for a hand-to-hand combat is given much lower priority as the focus of the armed forces is on using arms as a primary mode of combat. Entire units are formed around these weapon systems.

The Ghatak platoons of Infantry battalions (trained for special missions) do emphasise on unarmed combat apart from training in other military skills. Unarmed combat (UAC) also forms a part of army courses like the Ghatak(Commando) course, Counter insurgency and jungle warfare

Special Forces (SF), however, lay a lot of emphasis on unarmed combat and train their soldiers in martial arts and other techniques of neutralising an opponent.

As a routine, all units and formations regularly have boxing and wrestling competitions beginning from inter-platoon, inter-company, inter-battalion and at formation level.

While Central Armed Police Forces are trained in baton charging and use of tear gas equipment for crowd control, when the army is called in, it uses only weapons. Use of battons and sticks does not form part of the armed forces training. Armed forces are the nation's last bastion of defence and that's why all nations do their best to equip their armies with the best possible weapon systems to counter their enemies.

https://indianexpress.com/article/explained/unarmed-hand-to-hand-combat-explained-6464852/

THE TIMES OF INDIA

Fri, 19 June 2020

India elected non-permanent member of UN Security Council

United Nations: India was elected as non-permanent member of the powerful UN Security Council for a two-year term on Wednesday, winning 184 votes in the 193-member General Assembly.

Along with India, Ireland, Mexico and Norway also won the Security Council elections held Wednesday.

There were 192 Member States present for voting and the 2/3 required majority was 128. India garnered 184 votes. Canada lost the elections.

"Member States elect India to the non-permanent seat of the Security Council for the term 2021-22 with overwhelming support. India gets 184 out of the 192 valid votes polled," India's Permanent Mission to the UN tweeted.

India will sit in the most powerful UN organ, for two years beginning on January 1, along with the five permanent members China, France, Russia, UK and the US as well as non-permanent members Estonia, Niger, Saint Vincent and the Grenadines, Tunisia and Vietnam.

The two-year terms of Belgium, Dominican Republic, Germany, Indonesia and South Africa are ending this year.

To be elected to the Council, candidate countries need a two-thirds majority of ballots of Member States that are present and voting in the Assembly.

India was a candidate for a non-permanent seat from the Asia-Pacific category for the 2021-22 term. Its victory was a given since it was the sole candidate vying for the lone seat from the grouping.

New Delhi's candidature was unanimously endorsed by the 55-member Asia-Pacific grouping, including China and Pakistan, in June last year.

Previously, India has been elected as a non-permanent member of the Council for the years 1950-1951, 1967-1968, 1972-1973, 1977-1978, 1984-1985, 1991-1992 and most recently in 2011-2012.

The UN General Assembly on Wednesday conducted elections for President of the 75th session of the Assembly, five non-permanent members of the Security Council and members of the Economic and Social Council under special voting arrangements put in place here due to COVID-19 related restrictions.

Turkish diplomat and politician Volkan Bozkir was elected as President of the 75th session of the UN General Assembly. He was the endorsed candidate from among the Western European and other States.

The elections began at 9am Wednesday and unlike previous years, when the sprawling General Assembly hall would be packed with UN envoys, diplomats and staff during the ballot, this year presence in the UNGA hall was sparse due to COVID-19 related restrictions.

UN diplomats, staff and other personnel arrived at the General Assembly hall wearing masks and immediately left the venue after casting their ballots.

In adherence to social distancing guidelines due to the coronavirus pandemic, the 193 UN Member States were allotted different time slots to cast their votes in the General Assembly Hall for the crucial elections.

Eight time slots were allocated to Member States to cast their ballots starting at 9 AM, in adherence to social distancing guidelines. The voting continued well in the afternoon, with an additional 30 minute time slot for voters who were unable to visit the GA hall during the specific time slot communicated to them. The time slot for India to cast its ballot was 11:30 am-12noon.

President of the UN General Assembly Tijjani Muhammad-Bande oversaw the proceedings in the General Assembly Hall and the tellers also observed the whole process.

For the two vacant seats from among the African and Asia-Pacific States, Djibouti, India and Kenya were the three candidates. For the one vacant seat from among the Latin American and Caribbean States, one endorsed candidate was Mexico. For the two vacant seats from among the Western European and other States, Canada, Ireland and Norway were the three candidates.

The 15-member Security Council has five permanent members - the US, the UK, France, Russia and China - and 10 non-permanent.

Each year the General Assembly elects five non-permanent members for a two-year term. The 10 non-permanent seats are distributed on a regional basis as follows: five for African and Asian States; one for Eastern European States; two for the Latin American and Caribbean States; and two for Western European and other States. To be elected to the Council, candidate countries need a two-thirds majority of ballots of Member States that are present and voting in the Assembly.

India's Permanent Representative to the UN Ambassador T S Tirumurti had said that India's presence in the Security Council will help bring to the world its ethos of 'Vasudhaiva Kutumbakam'.

"India's journey with the United Nations is quite a remarkable one. As a founding member of the United Nations, India's contribution to implementing the goals of the United Nations Charter and to the evolution of UN specialised agencies and programmes has been substantial. In many ways, quite extraordinary," Tirumurti had said in a video message ahead of the elections.

"I'm confident that at a time when we are poised to celebrate the 75th anniversary of the United Nations and later the 75th anniversary of India's independence in 2022, India's presence in the Security Council will help bring to the world our ethos that the world is one family - Vasudhaiva Kutumbakam," he had said.

India has been at the forefront of the years-long efforts to reform the Security Council, saying it rightly deserves a place as a permanent member of the Council, which in its current form does not represent the geo-political realities of the 21st Century.

https://timesofindia.indiatimes.com/india/india-elected-non-permanent-member-of-un-security-council/articleshow/76434802.cms



Fri, 19 June 2020

These vessels are made of dreams

"It was unforgettable," describes Queenthunk Amalanathan F (Amal). He is talking about the miniature model of INS Vikramaditya, the flagship of the Indian Navy, which he built from scratch for the Aerospace Museum at Konni in Pathanamthitta district of Kerala. The warship, which he handcrafted in balsa wood, has an overall length of four feet, and is complete with 22 decks, and carries aircraft and helicopters just like the original model. "It's a scratch model where every single part is built manually without using any templates of ship modelling kits. Originally named Baku, and then Admiral Gorshkov it was a former USSR carrier vessel that served in the Soviet Navy. Later, it was upgraded as a brand new ship. There were no blueprints or photographs available

then. I had to read up a lot," he recalls.

mal's passion for ship modelling runs deep. "Did you know this craft is as old as shipbuilding? The miniatures of real ships serve various purposes. The oldest ship model can be found at the burial tombs in Egypt dating back to 2000 BC. A number of Greek era ships were destroyed completely, but somehow one ship model survived and is now displayed at a museum in Germany. In India, particularly in Visakhapatnam, ship models were carved on stones. In the earliest centuries, they were used to check



hydrostatics, hydrodynamics and stability of real ships. It allows visualising a ship's behaviour and other physical characteristics before the commencement of construction. This was before the days of 3D models or computer simulation."

https://www.defenceaviationpost.com/2020/06/these-vessels-are-made-of-dreams/



Science & Technology News

THE FINANCIAL EXPRESS

Fri, 19 June 2020

First Indian to reach space Rakesh Sharma on his fears and experience during space flight

Wg Cdr Rakesh Sharma remembered that his worst fear was to not let down t he Indian Air Force and the country as he was wearing the flags on his shoulders By Samrat Sharma

As various economies of the world step-up efforts to generate more and more profits through maximising manufacturing, Cosmonaut and Wing Commander Rakesh Sharma, India's first in space, said that we have become such a consumptive society that we are not bothered about the collateral effect of the consumption pattern. Speaking at a webinar conducted by the Kalam Centre, New Delhi, Ashoka Chakra awardee Wg Cdr Rakesh Sharma said that we need behavioural change as we are trying to live with an unsustainable lifestyle on a planet which has limited resources. He added that the load that the climate has to sustain to cleanse itself is fast approaching a point that our life on this planet has become unsustainable.

Pollution doesn't respect national boundaries

Talking about the need to see the earth as one entity, Rakesh Sharma pointed out that manufacturers in various countries choose to operate in other countries where the environmental laws are less stringent, however, they fail to realise that the load has to be borne by the same planet. Citing an old incident about Myanmar forest fire, he added that the upper air circulation moved the smoke column away from Myanmar to neighbouring countries, which indicates that pollution does not respect national boundaries.



Cosmonaut Rakesh Sharma said that the load that the climate has to sustain to cleanse itself is fast approaching a point that our life on this planet has become unsustainable.

Further in the discussion, Hero of the Soviet Union, Rakesh Sharma further said that inhabiting another planet is a good opportunity as we do not have any backup for the human genome but first we should learn to live with sustainability on our own planet.

Moments before take-off for space

On being asked about the state of mind right before taking off for space, he recalled that he was full of curiosity and excitement but was completely focussed on a high concentration level. He remembered that his worst fear was to not let down the Indian Air Force and the country as he was wearing the flags on his shoulders.

How does India look from space?

Wing Commander Rakesh Sharma portrayed that the great thing about India is that it has a huge coastline, which is visible from space and gives a brilliant sight. During the orbit around the earth, India's coastline is visible for around four minutes and seventeen times in a span of 24 hours. He added that no big cities are visible from space but if there is a long railway line in a desert or airplane flying over the ocean, it can be seen due to colour contrast and linearity.

How much sense does it make to allow private sectors to use ISRO's facilities?

The first Indian to reach the space, Rakesh Sharma, praised the decision to allow private players to use ISRO's facilities for their space research programmes. It is good that private sectors have

been given access to ISRO's facilities as it does not make sense that everyone is needed to replicate the facilities that are already there, Wg Cdr Rakesh Sharma told Samrat Sharma of Financial Express Online during the discussion. As far as the facilities are not being fully utilised, which is the case so far, it is wise to allow private players to use them and boost sustainability.

https://www.financialexpress.com/lifestyle/science/first-indian-to-reach-space-rakesh-sharma-on-his-fears-and-experience-during-space-flight/1995519/



Fri, 19 June 2020

Simple is best? Simple and universal design for fuel cell electrolyte

Researchers at Japan Advanced Institute of Science and Technology (JAIST) and Dalian Institute of Chemical Physics, Chinese Academy of Sciences have successfully established a universal synthetic design using porous organic polymers (POPs) for fuel cell electrolyte, according to an Editor's choice hot article published in the journal *Materials Chemistry Frontiers*.

Development of new materials for cost-effective technologies is urgent and necessary to bring about an environmentally sustainable society. Polymer electrolyte fuel cells have high expectations for a clean energy system that can support environmental protection. They must be able to split a molecule of hydrogen into positively charged protons and negatively charged electrons. For this purpose, polymeric materials with high proton conductivity are needed. Electrons do not pass through the material, only protons pass through, so we can be extracted as electricity.

Research has shown simple, universal, and cost-effective synthetic strategy for gaining highly proton-conductive POPs as shown in Scheme 1. They show excellent proton conductivity of 10-2 to 10-1 S cm-1.

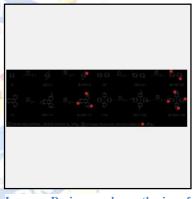


Image: Design and synthesis of POPs and sulfonated POPs (S-POPs).

In the research so far, there were problems that the synthetic method using POPs was complicated and the skeleton was limited. In order to establish the synthetic strategy universal for practical applications, we were able to try various skeletons as POPs and established the synthetic method applicable to almost all aromatic-based materials, says materials scientist Yuki Nagao of JAIST, who has been researching proton-conducting materials for many years.

They divided the synthetic steps into two steps. First, a porous organic polymer was synthesized. Second, a post-sulfonation strategy was adopted which then introduced sulfonic acid groups through the pores. The catalyst used during synthesis causes deterioration of the material during fuel cell operation, but it could also be removed by using the pores. A remarkable conductivity of S-POP-TPM (Scheme 1) was recorded on 2.7×10 -2 and 1.0×10 -1 S cm-1 under 25 and 80 °C at 95% RH, respectively.

"Results of this study indicate that the structure of sulfonated POPs offers a simple and universal means for evolving structural design for highly proton-conductive materials." explains Zhongping Li, who is the first author of this work. A step forward towards a hydrogen society.

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https://eurekalert.org/pub_releases/2020-06/jaio-sib061820.php



Fri, 19 June 2020

Discovery allows 3D printing of sensors directly on expanding organs

Technology could help diagnose and monitor patients with COVID-19

In groundbreaking new research, mechanical engineers and computer scientists at the University of Minnesota have developed a 3D printing technique that uses motion capture technology, similar to that used in Hollywood movies, to print electronic sensors directly on organs that are expanding and contracting. The new 3D printing technique could have future applications in diagnosing and monitoring the lungs of patients with COVID-19.

The research is published in *Science Advances*, a peer-reviewed scientific journal published by the American Association for the Advancement of Science (AAAS).

The new research is the next generation of a 3D printing technique discovered two years ago by members of the team that allowed for printing of electronics directly on the skin of a hand that moved left to right or rotated. The new technique allows for even more sophisticated tracking to 3D print sensors on organs like the lungs or heart that change shape or distort due to expanding and contracting.

"We are pushing the boundaries of 3D printing in new ways we never even imagined years ago," said Michael McAlpine, a University of Minnesota mechanical engineering professor and senior researcher on the study. "3D printing on a moving object is difficult enough, but it was quite a challenge to find a way to print on a surface that was deforming as it expanded and contracted."

The researchers started in the lab with a balloon-like surface and a specialized 3D printer. They used motion capture tracking markers, much like those used in movies to create special effects, to help the 3D printer adapt its printing path to the expansion and contraction movements on the surface. The researchers then moved on to an animal lung in the lab that was artificially inflated. They were able to successfully print a soft hydrogel-based sensor directly on the surface. McAlpine said the technique could also possibly be used in the future to 3D print sensors on a pumping heart.

"The broader idea behind this research, is that this is a big step forward to the goal of combining 3D printing technology with surgical robots," said McAlpine, who holds the Kuhrmeyer Family Chair Professorship in the University of Minnesota Department of Mechanical Engineering. "In the future, 3D printing will not be just about printing but instead be part of a larger autonomous robotic system. This could be important for diseases like COVID-19 where health care providers are at risk when treating patients."

Other members of the research team included lead author Zhijie Zhu, a University of Minnesota mechanical engineering Ph.D. candidate, and Hyun Soo Park, an assistant professor in the University of Minnesota Department of Computer Science and Engineering.

The research was supported by Medtronic (for sensor development) and the National Institute of Biomedical Imaging and Bioengineering of the National Institutes of Health under Award Number DP2EB020537. Additional support was provided by a University of Minnesota Doctoral Dissertation Fellowship awarded to Zhijie Zhu.

Story Source:

<u>Materials</u> provided by <u>University of Minnesota</u>. Note: Content may be edited for style and length.

Journal Reference:

1. Zhijie Zhu, Hyun Soo Park, Michael C. McAlpine. **3D printed deformable sensors**. *Science Advances*, 2020; 6 (25): eaba5575 DOI: 10.1126/sciadv.aba5575

https://www.sciencedaily.com/releases/2020/06/200617150045.htm

COVID-19 Research News



Fri, 19 June 2020

Systematic review and meta-analysis of coronavirus disinfection rates in water and wastewater

SARS-CoV-2, the virus responsible for the COVID-19 pandemic, is an enveloped virus in the coronavirus family that has been found to replicate in the respiratory and gastrointestinal tracts. While primary transmission of coronaviruses is through respiratory droplets, questions have been raised in the water and wastewater sector about persistence and disinfection of viruses in solution. In response to this need, Assistant Professor Andrea Silverman, in collaboration with Professor Alexandria Boehm of Stanford University, recently published a "Systematic Review and Meta-Analysis of the Persistence and Disinfection of Human Coronaviruses and Their Viral Surrogates in Water and Wastewater" in the journal *Environmental Science and Technology Letters*.

"While it is not believed that water and wastewater play an important role in coronavirus transmission, there is still a need to understand the fate of these viruses outside the human host, including their persistence in water and wastewater, and inactivation with exposure to commonly used disinfectants," writes Silverman, who has joint appointments in NYU Tandon's Department of Civil and Urban Engineering and the Department of Global Health at the NYU School of Global Public Health. "A greater knowledge of coronavirus decay rates in wastewater may also inform wastewater epidemiology, which has been suggested as a way to estimate disease burden or trends within the population."

To conduct the study, Silverman and Boehm combed the existing peer-reviewed literature to compile and collate quantitative information on rates of decay of coronaviruses in aqueous environments including water and wastewaters, with and without exposure to free chlorine and UV light, which are common water and wastewater disinfectants.

Based on coronavirus decay rates identified in the systematic review, the research team found that, in the absence of disinfectants, coronavirus inactivation rates were similar to those of non-enveloped viruses (e.g., enteroviruses, adenoviruses, noroviruses), which are more often studied in water environment and are used to benchmark exposure risks. The research team also found that there is very limited data available on coronavirus disinfection rates with chlorine and UV. Nonetheless, evidence suggests that coronavirus disinfection rates are similar to or greater than those of the non-enveloped viruses, and that disinfectant doses recommended by the US Environmental Protection Agency for other viruses will likely lead to effective disinfection of coronaviruses as well.

In addition to SARS-CoV-2, there are other viruses in the coronavirus family can present human and veterinary health risks; the findings of Silverman and Boehm 's study are applicable to these viruses as well. Overall, they conclude, "there is very little data available in the literature on coronavirus inactivation in aqueous solution with exposure to disinfectants. There is therefore a critical need for additional studies. . . . Additional research on the persistence of coronaviruses in water, as well as in the presence of sunlight, will further our understanding of their fate outside of the human body."

More information: Andrea I. Silverman et al. Systematic Review and Meta-Analysis of the Persistence and Disinfection of Human Coronaviruses and Their Viral Surrogates in Water and Wastewater, *Environmental Science & Technology Letters* (2020). <u>DOI: 10.1021/acs.estlett.0c00313</u>

Journal information: Environmental Science & Technology Letters

<u>https://medicalxpress.com/news/2020-06-systematic-meta-analysis-coronavirus-disinfection-wastewater.html</u>



Fri. 19 June 2020

Blood type, genetics could impact odds for severe Covid-19: Study

By Robin Foster and E.J. Mundell

A person's genes and blood type may help determine their odds for a nastier form of COVID-19, should they get infected with the new coronavirus, a new genetics study finds.

Published online June 17 in the *New England Journal of Medicine*, the research helps confirm earlier, more anecdotal evidence that blood type was tied to better or worse illness.

Now a team of European researchers have found that people with blood type A had a 45% higher risk of catching coronavirus and developing "COVID-19 with respiratory failure," compared to people with other blood types. On the other hand, people with type O blood had a 35% lower risk for this more serious form of COVID-19.

50 years

There are four main blood types: A, B, AB and O.

It's not clear why blood type might influence susceptibility to severe disease. Dr. Robert Glatter, an emergency medicine physician at Lenox Hill Hospital in New York City, noted that genes that control blood type also play a role in the makeup of the surface of cells. Changes in cell-surface structure might influence the vulnerability of the cell to be infected by the new coronavirus, he said.

"We also know from previous research that blood type affects clotting risk," he said, "and it's now quite evident that critically ill patients with coronavirus demonstrate significant clotting."

The new study was conducted by a multi-institution group of genetic researchers known as the Severe COVID-19 GWAS Group. They analyzed the genetics and blood types of more than 1,600 COVID-19 patients from Italy and Spain, as well as more than 2,200 healthy controls.

Besides the findings on blood type, the group also found that certain gene clusters were tied to higher odds of developing severe COVID-19 -- one such cluster raised the risk by 77%, the team reported.

According to Glatter, the genetic insights from the European study could also offer up new targets in the search for a COVID-19 vaccine.

Rise in cases in many states

In the meantime, states such as Arizona, Florida and Texas are all seeing record-high one-day increases in new coronavirus cases after reopening over the past few weeks.

According to *The New York Times*, on Tuesday, Florida reported 2,783 new cases, Texas 2,622 and Arizona 2,392. The trio of Sun Belt states are among 20 that have seen upticks in cases over the past two weeks.

Why numbers are rising has become a point of argument between politicians and scientists: Florida Governor Ron DeSantis said in a news conference that the rise in cases in his state is largely due to more widespread testing. But epidemiologists have suggested that increased transmission, due to businesses such as restaurants and bars reopening, is the true cause.

Backing up their claim, epidemiologists point to a concurrent rise in many states of increased coronavirus hospitalizations, as well as a rise in the percentage of positive results from tests.

Concerns are also mounting over hospital bed capacity in states seeing a rise in COVID-19 cases. But according to the *Times*, Texas Governor Greg Abbott believes his state's hospitals still have lots of capacity, even with 2,519 people hospitalized with the illness.

In New York, the former epicenter of the U.S. pandemic, Governor Andrew Cuomo on Sunday warned that a return to lockdown for his state was possible.

"If we have a high number of violations of the [reopening] policy, which is tantamount to a high likelihood of the spread of the virus, and the local governments are not monitoring policing, doing the compliance, yes, there is a very real possibility that we would roll back the reopening in those areas. The only alternative would be to pause the entire reopening," Cuomo said at a news conference, *CNN* reported.

By Thursday, the U.S. coronavirus case count had passed 2.1 million as the death toll topped 117,000.

There was some good news on Tuesday, however. Researchers at Oxford University in England announced that dexamethasone, a widely used, low-cost steroid, appears to cut the death rate for ventilated COVID-19 patients by one-third. It also lowered the death rate for patients who require oxygen (but are not yet on a ventilator) by one-fifth, the *Times* reported.

"Bottom line is, good news," Dr. Anthony Fauci, who directs the U.S. National Institute of Allergy and Infectious Diseases, told the *Associated Press*. "This is a significant improvement in the available therapeutic options that we have."

Economic upswing

On Thursday, another weekly batch of new jobless claims suggested that the damage the pandemic has wrought on the U.S. economy may be slowing. Roughly 1.5 million people filed for state unemployment insurance -- bad news, but at least a decline from the 6 million claims seen in a single week in March. More than 45.7 million claims have been filed over the past 13 weeks, NPR reported.

"We're slowly seeing the labor market recovery begin to take form," said Robert Rosener, an economist at Morgan Stanley, but "there's still an enormous amount of layoffs going on."

In other news, the U.S. government's supply of remdesivir, a drug known to shorten the course of COVID-19, will run out at the end of the month, Dr. Robert Kadlec, a U.S. Department of Health and Human Services (HHS) official, told *CNN*.

The government's last shipment of the drug will go out the week of June 29. Gilead Sciences, the company that makes remdesivir, is ramping up to make more, but it's unclear how much will be available this summer.

"Right now, we're waiting to hear from Gilead what is their expected delivery availability of the drug as we go from June to July," Kadlec said. "We're kind of not in negotiations, but in discussions with Gilead as they project what the availability of their product will be."

The government has been working to help Gilead "with some of their supply chain challenges in terms of raw materials and being able to accelerate the process," said Kadlec, the HHS assistant secretary for preparedness and response.

He added that it's clear that "whatever the supply may be, there may not be enough for everyone who may need it."

https://www.usnews.com/news/health-news/articles/2020-06-18/blood-type-genetics-could-impact-odds-for-severe-covid-19-study

