



# NewsLetter

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## EDITORIAL

### CORONAVIRUS. WHAT ARE WE ?

A virus that has shaken the world economy. A virus that has changed the way people live and work that is COVID-19. A novel respiratory virus that originated in Wuhan, China, has spread to over 196 countries in Asia, Europe, North America and the Middle East. More than 4 lakhs have been infected, WHO has already declared it Pandemic. So far, most of those infected with the virus have been in China, and most of the deaths have occurred there, as well. But now South Korea, Spain, Iran and Italy are coping with significant outbreaks. Italy has imposed restrictions throughout the country. The number of infections doubling every six days but the nation's capacity to test for the infection has lagged. Much remains unknown about the virus, including how many people may have very mild or asymptomatic infections, and whether they can transmit the virus. The precise dimensions of the outbreak are hard to know.

Coronaviruses are named for the spikes that protrude from their surfaces, resembling a crown or the sun's corona. They can infect both animals and people, and can cause illnesses of the respiratory tract. At least four types of coronaviruses cause very mild infections every year, like the common cold. Most people get infected with one or more of these viruses at some point in their lives. Another coronavirus that circulated in China in 2003 caused a more dangerous condition known as Severe Acute Respiratory Syndrome, or SARS. The virus was contained after it had sickened 8,098 people and killed 774. Middle East Respiratory Syndrome, or MERS, first reported in Saudi Arabia in 2012, is also caused by a coronavirus. The new virus has been named SARS-CoV-2. The disease it causes is called Covid-19. It is hard to accurately assess the lethality of a new virus. It appears to be less often fatal than the coronaviruses that caused SARS or MERS, but significantly more so than the seasonal flu. The fatality rate was over 2 percent, in one study. But government scientists have estimated that the real figure could be below 1 percent. Children seem less likely to be infected with the new coronavirus, while middle-aged and older adults are disproportionately infected. Men are more likely to die from an infection compared to women, possibly because they produce weaker immune responses and have higher rates of tobacco consumption, Type 2 diabetes and high blood pressure than women, which may increase the risk of complications following an infection.

Experts believe that an infected animal may have first transmitted the virus to humans at a market that sold live fish, animals and birds in Wuhan. The market was later shut down and disinfected, making it nearly impossible to investigate which animal may have been the exact origin. Bats are considered a possible source, which are consumed as a delicacy. The outbreak grew because of human-to-human transmission. People infected with the virus produce tiny respiratory droplets when they breathe, talk, cough or sneeze, allowing the virus to travel through the air. Most respiratory droplets fall to the ground within a few feet. People who are in close contact with those infected, particularly family members and health care workers, may catch the virus this way. When people don't know they are infected, "they're up and about, going to work or the gym or to religious services, and breathing on or near other people." Symptoms of this infection include fever, cough and difficulty breathing. The illness causes lung lesions and pneumonia. But

milder cases may resemble the flu or a bad cold, making detection difficult. Patients may exhibit other symptoms, too, such as gastrointestinal problems or diarrhea. Current estimates suggest that symptoms may appear in as few as two days or as long as 14 days after being exposed to the virus. There is a diagnostic test that can determine if you are infected.

Patients with mild cases are told to rest and drink plenty of fluids. Most people with mild infections recover in about two weeks. More than half of those who have been infected globally have already recovered. A number of drugs are currently being tested as potential treatments, including an antiviral medication called remdesivir, which appears to be effective in animals. A coronavirus vaccine is still months away and perhaps years.

How can you prevent the spread? Wash your hands frequently throughout the day. Avoid touching your face, and maintain a distance of at least six feet from anyone who is coughing or sneezing. The C.D.C. has warned Americans not to travel to China, Italy, Iran or South Korea unless it is absolutely essential. Older adults and people with chronic medical conditions should also consider postponing travel anywhere, particularly by air. W.H.O. officials have credited lockdown measures China imposed in late January for averting the spread of more cases from Wuhan. China sealed off cities, shut down businesses and schools, and ordered residents to remain in their homes. Officials used cellphone data to track and intercept those who have been to Hubei Province. In recent weeks, government workers have gone door-to-door to round up people who are infected, placing them in stadiums and other buildings that have been converted to makeshift hospitals. There is benefit to delaying its spread as long as possible.

Here is an example of Populist vs unpopular measures. The influenza epidemic of 1918 infected a quarter of the U.S. population, killing hundreds of thousands nationally and millions across the globe, seemingly small choices made the difference between life and death. As the disease was spreading, Wilmer Krusen, Philadelphia's health commissioner, allowed a huge parade to take place on September 28; some 200,000 people marched. In the following days and weeks, the bodies piled up in the city's morgues. By the end of the season, 12,000 residents had died. In St. Louis, a public-health commissioner named Max Starkloff decided to shut the city down. Ignoring the objections of influential businessmen, he closed the city's schools, bars, cinemas, and sporting events. Thanks to his bold and unpopular actions, the per capita fatality rate in St. Louis was half that of Philadelphia. (In total, roughly 1,700 people died from influenza in St. Louis.)

Lockdowns, Curfews - All of these decisions have real costs. The most important responsibility falls on each of us. It's hard to change our own behavior while the administration and the leaders send the social cue. But we must change our behavior anyway.

**Cancel Everything. Social distancing is the only way to stop the coronavirus. We must change !**



**Dr. A. K. Dewan**  
Director - Surgical Oncology

## INTRAMEDULLARY SPINAL CORD TUMORS AT “DIFFICULT LOCATIONS” : CURRENT CONCEPTS IN MANAGEMENT

Intramedullary spinal cord tumors (IMSTs) refer to a subgroup of intradural spinal tumors accounting for 5-10% of all intrinsic tumors of the central nervous system. Most intramedullary spinal cord tumors are considered to be glial in origin because they are histologically and immunohistochemically similar to differentiated non-neuronal cell types, such as ependymal cells and astrocytes, which occur in nonpathological spinal cord tissue.

Their most common initial symptom is either back pain or numbness, tingling and weakness of limbs. Because of the slow-growing nature of many of these tumors, symptoms precede diagnosis by an average of 2 years. Patients with intramedullary spinal cord tumors present in the range of several weeks to a few months after symptoms develop. Patients are assessed pre-operatively and post-operatively with Modified McCormick scale.

Grade	Modified McCormick scale
I	Intact neurologically, normal ambulation, minimal dysesthesia
II	Mild motor or sensory deficit, functional independence
III	Moderate deficit, limitation of function, independent with external aid
IV	Severe motor or sensory deficit, limited function, dependent
V	Paraplegia or quadriplegia, even with flickering movement

Collectively, spinal ependymomas and astrocytomas account for 80-90% of intramedullary spinal tumors, with ependymomas occurring roughly twice as frequently as astrocytomas. IMSTs can be found in any location throughout the length of the spinal cord; however, they are most common at the cervical level (33%), followed by the thoracic (26%) and lumbar (24%) levels. The higher incidence of IMSTs at the cervical level may be related to the higher level of gray matter present at that level. In adults, ependymomas are the most common tumor type whereas in children, astrocytomas are most common.

Contrast MRI spine is the investigation of choice. It produces exquisite detail of the spinal cord. Despite modern imaging capabilities, interpretation by an experienced neuro-radiologist is recommended due to overlapping characteristics amongst IMSTs. Most tumors are isointense or slightly hypointense as compared to the normal cord signal. Tumors generally exhibit some heterogenous or homogenous enhancement with gadolinium.

The first-line treatment for intramedullary tumors is open surgical resection. Surgery is indicated for all symptomatic lesions. Small asymptomatic lesions may be followed clinically and radiographically but this approach carries the risk of the development of neurologic deficits that are likely not recoverable and the uncertainty that comes with undetermined diagnosis. Radiotherapy is reserved for recurrences or high grade cases.

In the context of IMSTs, “difficult location” labelled is generally (i) **cervico-medullary region** because it contains all the vital centres and the chances of neurological deterioration are high and (ii) **thoracic cord** because of poor microcirculation within the thoracic spinal cord which increases the vulnerability of the spinal cord against intraoperative maneuvers.

In recent years, there has been a remarkable improvement in the surgical outcomes of patients with intramedullary spinal cord tumors, due to advances in diagnostic imaging and microsurgical techniques, and the introduction of ultrasonic surgical aspirators, neuronavigation, intraoperative ultrasound and neurophysiological monitoring (somatosensory evoked potential and motor evoked potential monitoring).

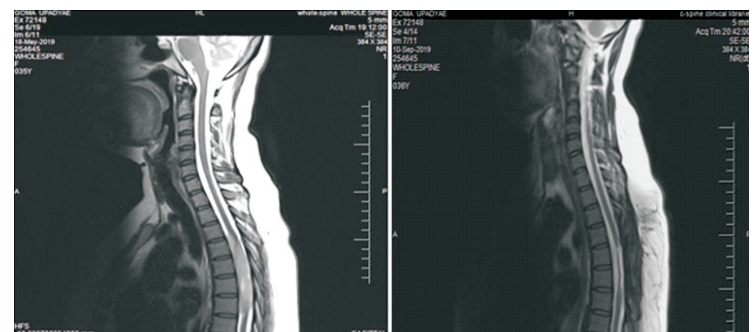
Gross total resection (GTR) should be the aim of surgery. Ependymomas can usually be resected completely under a microscope; however, the rate of total resection in recent literature has been approximately 80-

90%. Nevertheless, functional prognosis is still poor in patients with severe preoperative paralysis. On the other hand, astrocytomas are difficult to handle and are an operative challenge as compared to ependymoma cases because interface between tumor and spinal cord is difficult to find in astrocytomas due to their infiltrative nature. So complete resection of astrocytomas becomes difficult and requires a great deal of surgical expertise. All these procedures should therefore be performed at well equipped tertiary care centres preferably.

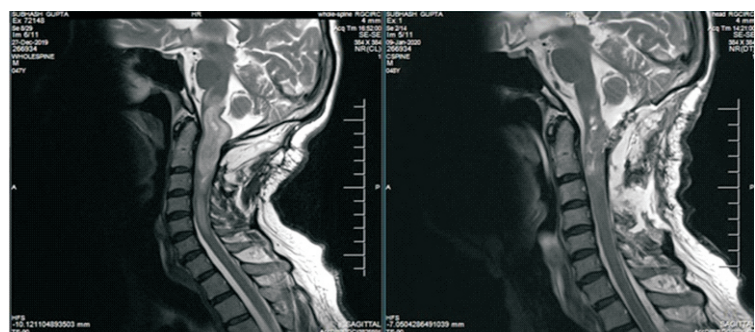
We mention two recently operated exemplary cases here. The first case was a middle aged female who presented with left lower limb weakness and numbness for a period of one year. On examination, she was classified as Modified McCormick grade II. She was found to have a large thoracic intramedullary tumor with minimal cord tissue seen (D4-D7 vertebral level). A gross total resection of the tumor was done in her case (Fig.1). She initially deteriorated neurologically and has now improved to pre-operative status over 3-4 months. Her biopsy revealed pilocytic astrocytoma, so no adjuvant therapy was given in her case and surgery turned out to be curative.

The second case involved a middle aged man who presented to us in quadriplegic state of one month duration (Modified McCormick grade V). His MRI revealed a large cervico-medullary spinal cord tumor. He was operated at some other hospital previously but they only did a biopsy. His tumor biopsy also revealed pilocytic astrocytoma. He was re-operated and gross total resection was achieved (Fig.2). He has started improving neurologically and regained 2/5 power in the limbs, till the time of follow-up.

So early diagnosis and early surgery is the way to go in case of intramedullary spinal cord tumors, even at difficult aforementioned locations, before the paralysis becomes severe and irreversible.



**Fig.1**  
Preoperative and Postoperative T2 sagittal MRI showing gross total resection of thoracic cord pilocytic astrocytoma



**Fig.2**  
Pre-operative and post-operative T2 sagittal MRI spine showing gross total resection of cervicomedullary pilocytic astrocytoma

**DR. RAMANDEEP SINGH JAGGI**  
Sr. Consultant and Unit Head,  
Neurosurgical Oncology (Brain and Spine),  
RGCIRC



## RGCON 2020 FOCUSED ON HEMATO-ONCOLOGY UPDATE



RGCON 2020 (Hemato-Oncology Update), the 19<sup>th</sup> annual international conference of Rajiv Gandhi Cancer Institute & Research Centre was held in New Delhi from 7<sup>th</sup> - 9<sup>th</sup> February 2020 and was focused on recent advances in hematology diseases like leukemia, lymphoma, myeloma, aplastic anemia and other bone marrow failure syndromes, hemophilia, sickle cell disease & thalassemia.

Renowned national and international faculty in the field of Haematology, Hemato-Oncology & stem cell transplant participated

and delivered lectures on the current practices and recent advances in the field of Hemato-oncology and hemato-pathology. Also a round of quiz was held for hematology trainees with a huge response from student doctors.

Other unique features of RGCON 2020 were myeloma patient meet, BMT nursing symposium, Infectious Disease symposium and transplant coordinator's meet. Myeloma patient meet was organized by myeloma patients support group and was remarkable for its unique direct interaction of myeloma patients and their care givers with the international myeloma experts. The nursing symposium too was well attended and appreciated for its content and good interactive sessions. Infectious Disease symposium was attended by hemato-oncology fraternity, infectious disease specialists and nurses with the aim to acquire safe practices to prevent & treat life threatening infections. Transplant Coordinators discussed about newer concepts in BMT coordination & data management.

Team of organizers consisted of Dr. Dinesh Bhurani (Director), Dr. Rayaz Ahmed (Senior Consultant), Dr. Narendra Agarwal (Senior Consultant), Dr. Narender Tejwani (Consultant) and Dr. Nitin Bansal (Consultant).

### *Rajiv Gandhi Cancer Institute & Research Centre, Niti Bagh, South Delhi*

## “PAIN AND PALLIATIVE CARE” – A NEW PILLAR IN CANCER TREATMENT



**RGCIRC, Niti Bagh**

In Oncology practice, there is a growing need to provide comprehensive care so that we can improve the quality of life of patients suffering with advanced stage metastatic cancer. Palliative care is the need of the hour and is a new supporting pillar for this comprehensive model of cancer treatment along with surgery, radiation and chemotherapy. Palliative care is a part of best practice in Oncology, as endorsed by the American Society of Clinical Oncology (ASCO), European Society for Medical Oncology, the National Comprehensive Cancer Network (NCCN), and the Society for Surgical Oncology. In simple terms, we describe palliative care as:

- P** - Pain relief
- A** - Approach “multidisciplinary to interdisciplinary”
- L** - Living worthy life knowingly death is inevitable
- L** - Loyal and effective communication
- I** - Inspire allied specialties for early palliation of patient
- A** - Allay anxiety of patient and family

- T** - Trustworthy “doctor-patient” rapport
- I** - Identification of issues (physical, psychosocial, spiritual & emotional)
- V** - Vitality of body and positivity of mind
- E** - Enhance quality of life by early palliative care

Studies have shown that patients with advanced cancer receiving potentially curative therapy are likely to suffer from variety of symptoms (physical as well as psychological). Apart from pain treatment which is the foremost need of palliative care, patients as well as their families also need education/counseling for their spiritual, financial and family distress that occur as a result of the diagnosis of a devastating disease and a poor prognosis. To counter this distress, pain and palliative care treatment should be introduced at the earliest in the course of cancer management.

Evidence has shown that early pain and palliative care definitely improves the quality of life and increases functional capacity by reducing the sufferings of the patient due to better symptom control. We, at Rajiv Gandhi Cancer Institute and Research Centre are happy to combine Pain and Palliative/Supportive care along with the Oncology units to have a better outcome in terms of overall patient care in cancer treatment.

**Dr. Sunny Malik**

Consultant Department of Anaesthesia, Pain and Palliative Care  
Rajiv Gandhi Cancer Institute and Research Centre  
Niti Bagh, Delhi

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## DO YOU NEED MEDICAL SECOND OPINION ??

Many cancers are seen at primary physician level, the physicians working in remote/ rural areas may also need expert specialist opinion on latest treatment options before commencing/ or continuing the treatment.

The gap for easily accessible medical second opinion (MSO) is clearly seen in the healthcare context of India

**Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC)** provides unbiased, easily accessible medical second opinion for -1) Physicians at primary care level and for - 2) Patients/ or their relatives. If you or your near ones have been diagnosed with a chronic medical condition such as cancer, or if you are planning to undergo a surgery and would like to get a second medical opinion from renowned national or international experts, you can get it now in the comforts of your home. There is no need to travel to bigger cities, search for an appropriate expert, seek an appointment, etc. Experts at the **Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC)** can provide Second Opinion on cancers within three working days.

An unbiased Second Opinion helps the patients get the right opinion, at the right time, by the right provider in the comfort of their home. Travel, boarding/ lodging and other costs for the patient and an accompanying person are saved including efforts in identifying the right expert and seeking an appointment. Patients get access to world class super specialists for advice on complex cancers that help in informed decision making and saving costs. Chances of errors in cases of doubt about diagnosis/ management are reduced.

Generalist doctors seeking a Second Opinion gain access to world class super specialists and chances of errors in cases of doubt about diagnosis/ management are reduced.

**Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC)** has collaborated with **Secmeds Medical Solutions** for the **Second Opinion services**.

**Just register and upload your reports at [www.secmeds.org](http://www.secmeds.org) or call 9870263903 and get an Opinion within 3 working days.**

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To:

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Rajiv Gandhi Cancer Institute and  
Research Centre, D-18, Sector - 5,  
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Editor: Dr. A. K. Dewan