

## **Retracing the path of contagion arising from the “super-spreader”**

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***The following is an English translation of the article published in China Newsweek (link above), which was cited in the Report from the Stanford Endoscopic Sinus and Skull Base Team. The article contains an anecdotal account of how Covid-19 was spread to 14 medical staff after pituitary surgery. Only the information pertaining to the pituitary case and the subsequent spread of Covid-19 have been included; comments in the rest of the article which allege censorship by authorities and/or cover-up have been omitted.***

***The translator is an Otolaryngologist who is a native speaker of Mandarin Chinese, but is not a professional translator.***

On Jan 21, it was reported in the Chinese media that, in Wuhan, 14 medical workers had caught the Covid-19 virus from a single patient, raising the possibility of a “super-spreader”. The city mayor, speaking in a media interview, said that the patient was from the neurosurgical service at a local hospital. He said that the patient had symptoms of Covid-19 prior to admission, but these were overlooked. By the time the patient had fever post-operatively, one doctor and 13 nurses were already infected.

In response, a neurosurgeon from the aforementioned hospital clarified that the patient had no respiratory symptoms prior to surgery. He had developed a chest infection on post-operative day (POD) 3, and was diagnosed with “pneumonia of uncertain origin” on POD5. In addition, the correct breakdown of infected personnel ought to have been: 10 nurses from Neurosurgery, and one medical staff each from the departments of cardiology, cardiothoracic surgery, pediatric surgery, and OBGYN.

He recounted the following details:

A 69-year-old gentleman, “Patient A”, had been admitted for 12 days prior to surgery for a pre-operative cardiac workup due to comorbidities including coronary heart disease and sinus bradycardia.

Prior to surgery, he had no respiratory symptoms. He was afebrile, with a normal total white cell and lymphocyte count. A routine pre-operative chest X-ray showed a shadow in the left costophrenic angle. In view of his age and smoking history, lung inflammation or increased lung markings were to be expected.

A week prior to this, municipal health authorities had requested that the hospital make a tally of all patients who were diagnosed with “pneumonia of uncertain origin”.

However, as the patient appeared clinically well, there was essentially no reason to suspect that he belonged to this category. Thus, while some doctors exchanged advice on “being careful”, it was difficult to justify instituting isolation precautions at that point in time. Furthermore, personal protective equipment such as respirators were considered consumable items, and usage would carry attendant costs and accounting considerations.

The operation went smoothly on Jan 8 and the patient was initially transferred to ICU and then stepped down to the general ward. In the interim, it was reported on Jan 9 (i.e. POD1) that the case cluster of “pneumonia of uncertain origin” arising in Wuhan had been preliminarily ascribed to a novel coronavirus.

On POD3 (Jan 11), Patient A developed fever, with a raised total white count, neutrophilia, and lymphocytes on the lower limit of normal. A CT thorax showed bilateral multiple patchy opacities and a right pleural effusion, with ground-glass changes suspicious for interstitial pneumonia. This was immediately reported to Infectious Diseases. A series of sputum and throat swab specimens were dispatched, but SARS-CoV-2 testing kits were unavailable then, and virologic studies all returned negative.

On POD5 (Jan 13), Patient A took a turn for the worse, with progressive changes on CT. Medical staff who had come into contact with him serially developed fever. Patient A was shifted to the isolation ward and was further treated by pulmonologists and infectious disease specialists. Febrile medical staff were isolated by the hospital.

On POD7 (Jan 15), Patient A was formally diagnosed with Covid-19 and transferred to a different hospital.

Retrospectively, 2 other patients in close proximity to Patient A in ICU also developed Covid-19.