Historical Note
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On the history of the study of haemorrhagic fever with renal syndrome in eastern Russia

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Introduction

Haemorrhagic fever with renal syndrome (HFRS) is now a widespread condition and poses a threat to public health in many countries. It is of special importance in Russia where it occurs frequently and has a severe clinical course in some areas.

As is now well known, HFRS is a viral zoonotic infection that causes systemic impairment of small blood vessels and especially serious damage in veins. It produces haemorrhagic diathesis with diverse haemorrhagic manifestations and circulation disorders that are typical for tubular interstitial nephritis of renal involvement followed by acute renal failure.

The history of the study of HFRS in Russia is both interesting and peculiar. The attention of physicians and researchers had been attracted to the disease for the first time in 1935 when V. A. Targanskaya described unusual clinical features of an illness considered to be acute nephritis. She was an assistant professor at the Khabarovsk Medical Institute facultative therapy chair, which is the same position that we currently hold.

Our teacher and predecessor, professor S. I. Ratner, contributed considerably to the study of HFRS and had worked with Dr Targanskaya during the earliest studies. The following is the very first description of HFRS: ‘The first cases of haemorrhagic nephrosonephritis were observed in our hospital in 1934 and were described in 1935 by our assistant V. A. Targanskaya, in the article “On clinical features of acute nephritis’’ [1].

In all three cases described in the paper, the illness had a violent onset, with chills, high fever, headache and back pain, followed by the appearance of urinary syndrome. Hypertension was not seen in two of the three cases and edema was not found in any of them. All of the patients vomited repeatedly and had nausea.

Beginning with an afebrile phase, the clinical course worsened and azotaemia increased, but over several days diuresis increased with a regression of symptoms and a general improvement of health. At the time we diagnosed the illness as an unusual course of acute nephritis that had neither hypertension nor edema. In recollection, the lack of the former sign was embarrassing and stimulated us to consider the possibility of an unknown disease that had not been recognized in 1934.

Surprised by the strong abdominal symptoms in one patient, V. A. Targanskaya confessed that upon admission the patient was not thought to have had renal disease [2]. Thus, it was under the name of a different illness that a new disease, now ubiquitous throughout the world, had entered the medical literature.

The first to identify the new disease was A. V. Churilov, and so for some time it was called Churilov’s disease and later on, nephrosonephritis. In his paper, Churilov wrote: ‘Since April 1935, together with my colleagues S. P. Irlin and I. A. Miller, we observed and described a large number of cases of an unusual disease, originally registered as Churilov’s disease or nephrosonephritis’ [3]. It is a new disease for medicine.

He added that ‘Apparently haemorrhagic nephrosonephritis occurs solely in the Russian Far East, because all the descriptions of the illness made in 1934 had been based exclusively on the cases seen in that area’.

Although in 1938–39, a similar disease under a different name was reported in the North-Eastern provinces of China that bordered Russia, the Far East of Russia was thought for a long time to be the only reservoir of the illness.

To study the new disease, several research expeditions were sent there under the leadership of I. I. Rogosin in 1939, and then a famous Russian virologist, Smorodintsev, in 1940. The members of those expeditionary teams together with the local physicians had done a great deal of work in studying

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the etiology, morphology, epidemiological and clinical features of the disease, called at that time endemic haemorrhagic nephrosonephritis.

The very first monograph, written in 1947 by one of the pioneers in the study of the disease, Professor Ratner, was entitled ‘Clinical features of endemic haemorrhagic nephrosonephritis’ (Fig. 1).

Years have passed and it is now evident that the disease in question occurs throughout the world. M. P. Chumakov, one of the main contributors to the study of haemorrhagic fever, suggested to unite all its regional variants into one disease called HFRS.

This name was supported by experts of the WHO working group, who recommended calling all infections with fever, haemorrhage and renal involvement HFRS. They also mentioned that HFRS was a threat to many countries [4].

References

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