

Supraclavicular node metastasis presenting with Internal Jugular Vein Thrombosis.

Dr. S. Brincat M.R.C.S. M.R.C.P. (UK) F.R.C.R.
Department of Radiotherapy
Sir Paul Boffa Hospital
Floriana
MALTA

ABSTRACT

A case of internal jugular vein thrombosis secondary to compression by a metastasis in Virchow's node and the investigations leading to the diagnosis is described.

INTRODUCTION

Internal jugular vein thrombosis was not an uncommon complication of fulminant sepsis in the head and neck in the pre-antibiotic era. The commonest causes are now iatrogenic usually secondary to central venous catheterisation or related to intravenous drug abuse.

Thrombosis commonly complicates superior vena caval obstruction secondary to malignancy in the chest but isolated internal jugular vein thrombosis is rare and usually secondary to obvious tumour in the neck. Infection related to head and neck malignant disease may also cause venous thrombosis.

CASE REPORT

A 45 year old lady with adenocarcinoma of the right kidney and gross recurrence in the kidney bed and para-aortic nodes one year following nephrectomy presented with an acute painful swelling of the left side of the neck of three days duration. She had felt feverish on one day and had a painful dysphagia. She had completed a course of palli-

ative radiotherapy to the retro-peritoneal recurrence four weeks previously with good symotomatic relief.

On examination she was afebrile. There was a diffuse very tender swelling of the left side of the neck. No primary source of infection could be found in the area of drainage but a trial of antibiotics and analgesics were advised. The next day she returned com-

plaining of persistent severe pain. The swelling on the left side of the neck extending from the mastoid to the medial end of the supraclavicular fossa was more prominent.

Rapidly enlarging lymph node metastasis was felt to be likeliest diagnosis. She was admitted to hospital and as she was unable to swallow because of pain she was started on intravenous fluids, anti-biotics, hydrocortisone and morphine. The following day she was considerably better but the swelling persisted and remained very tender.

On the second day of her admission a computerized tomographic (CT) scan of the neck and upper thorax showed thrombosis of the left internal jugular vein with oedema of the surrounding soft tissues. The thrombosis extended from the level of the mastoid to the junction with the brachiocephalic vein. No separate mass could be indentified. Clotting screen was normal.

Computerized sonography was then used to examine the neck. This not only clearly demonstrated the presence of thrombosis in the internal jugular vein but also a 1.1cm

node lying along the vein close to the junction with the brachiocephalic vein (Fig.1)

On diagnosis of internal jugular vein thrombosis anti-coagulation with heparin and warfarin was started.

She also received a palliative course of radiotherapy (2800 cGy in 7 fractions 3 times a week) to the medial half of the left supraclavicular fossa.

The pain and swelling subsided during the course of her radiography and she was asymptomatic 10 days following admission. She was discharged on treatment with warfarin.

DISCUSSION

Thrombophlebitis is a recognized complication of a number of abdominal malignancies and may even be the presenting feature. This complication however does not effect the large veins of the chest and neck, and the presence of a normal clotting screen in this case further increased the suspicion of compression by a lymph node metastasis.

Contrast enhanced CT scanning has been shown to be reliable in diagnosing internal jugular vein thrombosis (Cohen, 1985). The findings consist of a clearly defined circular structure, the lumen of which contains a low density mass (the thrombus) lying in place of the normal internal jugular vein. ►

► Venous enlargement is common as in this case (Fig. 2). The sharp definition of the vessel wall is due to uptake of contrast by the vasa vasorum. CT scanning however failed to demonstrate the cause of the thrombosis on this occasion.

Computerized sonography (Maslak, 1985) is providing a new dimension in ultra sound examination. Unlike CT scanning it is a dynamic investigation and provides image quality far superior to that of conventional ultra sound.

In examination of the liver it has been shown to be capable of detecting metastasis up to 4 mm in size. Lymph node metastasis in the abdomen can also be very readily detected. In experienced hands abdominal examination and biopsy of a suspicious lesion can be carried out in under thirty minutes. Perhaps even more important the results are not so heavily dependent on the skill of the examiner as with conventional ultra-sound examination.

This form of investigation only became available to the department after the patient had started the course of radiotherapy. She had received five fractions of 400 cGy each over 10 days to the medial half of the left supraclavicular fossa at the time of examination so that some reduction in size of the node may already have occurred.

In the presence of an acute onset of painful swelling in the neck where there is a history of malignant disease known to metastasize to or indirectly involve the neck, the possibility of internal jugular vein thrombosis as a result of venous compression should be borne in mind.

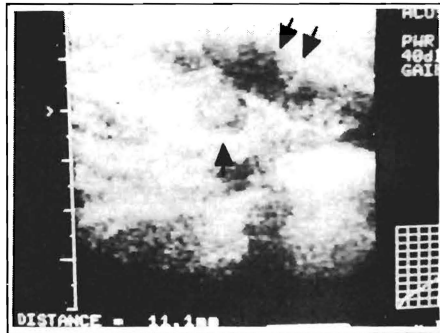


Fig. 1:-

Computerized Sonographic scan showing lymph node metastasis (black arrow) adjacent to distended thrombosed internal jugular vein (double black arrow) just above junction with brachiocephalic vein.

REFERENCES

1. Cohen, J. Reede, D. Internal Jugular vein thrombosis. *Laryngoscope* 95, 1478-1482.
2. Maslak, S.H. *Computed Sonography. Ultrasound Annual 1985*, pp. 1-16



Fig. 2:-

CT scan of neck. Enlarged left internal jugular vein with enhancement of vascular wall clearly seen. (Black arrow). This structure extended from the mastoid process to the junction with the brachiocephalic vein.

The copyright of this article belongs to the Editorial Board of the Malta Medical Journal. The Malta Medical Journal's rights in respect of this work are as defined by the Copyright Act (Chapter 415) of the Laws of Malta or as modified by any successive legislation.

Users may access this full-text article and can make use of the information contained in accordance with the Copyright Act provided that the author must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the prior permission of the copyright holder.

This article has been reproduced with the authorization of the editor of the Malta Medical Journal (Ref. No 000001)