

the right supraclavicular region. Examination of the chest showed consolidation of the whole of the right lung and a pleural effusion. The liver was grossly enlarged and tender.

The diagnosis in this case was not easy. There was obviously superior vena caval obstruction, and carcinoma of the bronchus with large hilar secondaries seemed a likely diagnosis. The gross enlargement of the breasts developing so rapidly and the shortness of the history were both confusing factors. Her condition rapidly deteriorated, and she died three days after admission.

Post-mortem examination confirmed the diagnosis of carcinoma of the bronchus with lymphatic obstruction and obstruction of the superior vena cava. There was a purulent tracheitis, bronchitis, and there were multiple small abscesses containing thick yellow pus in the right lung, which was solid with grey pneumonic consolidation. The right bronchus led into a firm white mass at the hilum of the lung.

This growth invaded the right lung deeply and occupied a considerable part of the mediastinum, being about 6 in. (15 cm.) in diameter. In the mediastinum the mass was a mixture of primary growth and secondary glands. The growth had penetrated through into the right auricle and superior vena cava, which was partially occluded. The left lung was congested; the right pleura contained a large yellow effusion. There was a toxic change in the myocardium and gross "bread-and-butter" pericarditis with dilatation of the neck veins.

On sectioning the breasts, the enlargement was seen to be due to oedema, which was also present in the presternal subcutaneous tissue.

I am grateful to Dr. S. A. Propert, Honorary Physician, Essex County Hospital, Colchester, for permission to publish this case, and to Dr. J. B. Penfold, who performed the post-mortem examination, for his advice and criticism.

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### Pethidine as a Supplement to Nitrous Oxide Anaesthesia

The synthetic analgesic pethidine provides an alternative to morphine that possesses certain advantages over the natural alkaloid. The high degree of pain relief without respiratory depression or interference with the cough reflex, and the possession of certain atropine-like properties, have made it justly popular in obstetrics and in the relief of post-operative pain.

On a recent visit to San Francisco one of us saw this drug being administered intravenously as a supplement to nitrous oxide anaesthesia by Dr. William B. Neff, professor of anaesthetics at Stanford University, with excellent results both on the operating table and after. This use of pethidine does not seem to have been previously investigated in this country. We have since used it in upwards of 100 cases, with very gratifying results. It has been usual at the end of a long anaesthesia for the patient to reply to questions before leaving the table, and there has been a noticeable absence of post-operative pain and restlessness, often such a feature of other techniques where rapid recovery of consciousness occurs.

It has been our practice to put the patient to sleep with thiopentone and then administer nitrous oxide with some 30% of oxygen. An intravenous injection of 25 mg. of pethidine is given at the outset. This dose is repeated as often as is necessary to subdue any reflex activity on the part of the patient. We have found that 25 mg. of pethidine is needed about every 20-30 minutes in the average case. In abdominal and thoracic operations we have given occasional injections of "flaxedil" (a synthetic curarizing substance) or curare when the abdomen is tight or when the cough reflex is active. A rising pulse rate or blood

pressure, or similar reaction to painful stimuli, is an indication that pethidine is required. The results during and after operation have been so good that we feel justified in publishing this early report, in case our colleagues may not be aware of the method.

We record our great debt to Dr. William B. Neff, who has developed this form of anaesthesia to a high degree.

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### Splint to Control Dorsal Subluxation of Proximal Interphalangeal Joints of Fingers

In the *British Medical Journal* of Dec. 11, 1948 (p. 1030), Dr. Trevor Howell stated that the problem of deformed fingers with ulnar deviation and subluxation was unsolved. In many of these cases the main deformity is a dorsal subluxation of the proximal interphalangeal joint, and in the Cowley Road Hospital, Oxford, we have introduced a splint which controls the subluxation while allowing free flexion of the finger. The splint is constructed of a single piece of heavy-gauge single-strand galvanized wire, padded and covered with leather. It consists of three transverse arms, one ventral to the proximal interphalangeal joint, and two others dorsal to the phalanges on either side of it. These arms are connected by side pieces, and the splint is so adjusted that the finger in maximum extension is slightly flexed, as in Fig. 1. As shown in Fig. 2, the splint forms

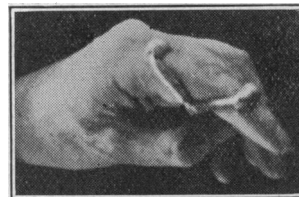


FIG. 1

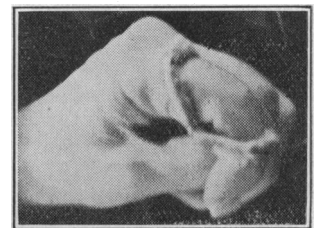


FIG. 2

no bar to flexion to the limit of the capacity of the joint. The side pieces of the splint should be tight enough on the finger to maintain the splint in position during flexion.

The patients who have been provided with these splints have remarked on an increased range of usefulness of the hand. This is because the finger can no longer "lock" in a subluxated position, and also because the initiation of flexion is carried out with the finger in a much more advantageous mechanical position for the flexors, and therefore with more power. Further, if fixation of the joint is progressing, it will occur in a more satisfactory functional position if the deformity is controlled. None of the splints have been worn long enough to show whether their use can be curative, but it is possible that it might be so after constant wear for a period of several months. The splint is also useful in cases of this deformity arising from other causes.

(Since this note was written one patient suffering from paralysis agitans has undergone a complete cure of this deformity and now has a good functional hand after wearing the splint for nine months.)

My thanks are due to Dr. J. H. Spence, medical officer to the Cowley Road Hospital, for permission to publish this account, and to Mr. Eric Hillsdon for constructing all the splints since production of the prototype.

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