CLINICAL NOTE

A SIMPLE NASAL SPLINT

By I. MATIS (Kaunas, Lithuania)

FOR the more severe fractures of the nasal bones accompanied by a falling in of the bridge, it is often necessary to resort to the use of a nasal splint. Bearing in mind the anatomical conditions the construction of such a splint is by no means easy. Only a few very complicated types of splints have become common, e.g. by A. Watkins. This consists of a pair of " U "-shaped metal splints, one arm of which is inserted into each nostril, and anterior traction is exerted by means of a silk thread secured to the outside part of the arms opposite to the middle of the nasal bone. These arms are tied to a mast from a hinged forehead plate which is held in place by a hinged arch with rubber-covered bases resting on the cheeks.

Certain writers on this subject prefer to exert traction to the nasal bone by threads perforating the nose (Carter).

Circumstances, however, often require the help of a simpler means because the above-mentioned splints are not always available. Furthermore, patients often refuse to permit nose perforation for the use of the Carter splint because they wish to avoid any external marks.

The question of a simply made and easy-to-use splint is of great importance, especially in cases of emergency. To attain this goal for nasal fractures is much more difficult than in fractures of the limbs, because in the former case conditions do not allow simple traction of the broken bones in the most favourable direction and with properly applied force.

The author suggests that the principle of direct traction be given up and to use that of the lever. The following is a description of a splint he proposes for the purpose (Fig. 1). The base of the appliance is a metal plate padded with rubber and shaped so as to conform to the contours of the cheeks and upper lip. The corners of this plate are perforated to take the tapes or straps by means of which the whole affair is secured by fastening them at the back of the head. From the middle of the base plate near the top edge, there is a vane perpendicular to it, and this is also perforated at intervals to take other parts of the appliance. Two small strong

https://doi.org/10.1017/S0022215100005776 Published online by Cambridge University Press

rubber-sheathed metal arms are inserted into the nostrils for the purpose of pressing the nasal bones forward. These arms are slightly curved and their length and shape must, of course, be adapted to the individual case. The arms are connected by two screws which are intended for adjusting the distance between them and for keeping them parallel to each other. One of the two screws mentioned passes through a hole in the perpendicular vane, whilst the other passes through the outside ends of the arms. These outside ends of the arms are also perforated to take tapes or straps which are used for pulling the inner ends forward. As already stated, the principle is that of the lever, the fulcrum being the screw through the perpendicular vane, by means of which pressure exerted on the outside ends of the arms is transmitted to the ends inside the nose.

The appliance is fitted on as follows: After introducing the upper ends of the two arms into the nostrils, the base plate is placed on the upper lip and then by means of the tapes or straps it is tightly secured at the back of the head in such a manner that it is kept firmly in position. Now the tape or strap attached to the outside ends of the two arms is passed behind the head and is tightly secured, thus bringing the lever principle into play by pressing the arms against the fractured bones, pulling them forward and holding them in this position. The pressure so exerted is kept constant and equal until the knitting of the bones is complete, but it must be remembered that, no matter how strong the tension was when first applied, it will, of its own, gradually weaken off. A constant and equal pressure can be assured if the tape or strap from the ends of the arms is attached to a light weight behind the head and allowed to hang over the back of the chair in which the patient is sitting, or over the head of the bed (Fig. 2).

The splint must always be adapted to the shape of the upper lip, cheeks and nose, bearing in mind the very great variety of the human face. As the construction of the splint is simple, it can be made without the help of a skilled instrument maker, and it is useful in cases of unfavourable emergency.

BIBLIOGRAPHY

WATKINS, A. B. K., *J. Laryng. and Otol.*, December, 1933.
WATKINS, A. B. K., *British Medical Journal*, November 18th, 1933.
CARTER, W. W., *Med. rec.*, ci, 237, 1922.
SALINGER, S., *Illinois med. journ.*, xlviii, 304, 1925.
EITNER, E., *Wien. med. Wschr.*, i, 307, 1934.
GILLIES, H. D., *Proc. Roy. Soc. Med.*, xvi, 3, Sect. Laryng., 1923.

https://doi.org/10.1017/S0022215100005776 Published online by Cambridge University Press