

Septum dislocation in the newborn: a long-term follow-up study of immediate reposition

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SUMMARY

A report on the late outcome of reposition performed for septal dislocation present at birth. 42 cases have been examined 13 to 16 years after the intervention and it has been found that in the majority of patients (69%) the final esthetic and functional results have been satisfactory. Conversely, those cases (31%) where uni- or bilateral obstruction was still present at the time of late control had experienced a markedly increased incidence of upper respiratory infections.

The different situations present at birth are indicated and it is stated that cases which tend to recur after repositioning requiring a second intervention and - possibly - unilateral packing are more likely to have an unsatisfactory late outcome.

It has been well known for a long time (Metzenbaum, 1936) that septal dislocation in the newborn may be caused by trauma in passing the birth canal and - less frequently - by traumatism during fetal life.

The incidence of this condition varies extensively depending on the type of obstetric facilities available between 1,45% in Scandinavia (Jeppesen, 1972) reaching 15,4% in India (Sooknundun, 1986) and on the type of delivery being obviously higher in complicated deliveries and in primiparae.

Gray has studied extensively this problem (1965, 1978) and particularly the development of septal deformity up to the age of eight years (1983) reaching the conclusion that septal deformity present at birth does not disappear with growth and may lead to a significant increase of dental abnormalities, upper respiratory infections and ear disease.

Similar conclusions have been reached by Sooknundun et al. (1986) who compared the late results (up to the age of 5) of a group of cases who had reposition at birth with the outcome of untreated cases.

Reposition of the septal cartilage in the first days of life can be performed without anaesthesia with a blunt instrument and achieves a satisfactory reduction.

In our Institute, we have been checking all newborns systematically for this problem since 1973 and found that reposition of the septum to its original position was necessary in an average of 2.02% of all neonates. Others have reported a higher incidence but this is very likely due to the fact that their statistics include simple flattening of the tip and slight deviations from the midline, which – in our experience – tend to straighten spontaneously and do not require any type of manipulation.

CASE MATERIAL

The aim of the present investigation has been to ascertain the long-term evolution of septal growth following manipulation at birth and to establish whether there might be conditions able to influence the final outcome of reposition.

Out of a total of 157 cases treated between 1973 and 1975 we have been able to examine, 13 to 16 years later, 44 cases.

As two boys had experienced severe nasal trauma in the meantime 42 cases (24 males and 18 females) could be included in this study.

We have examined a number of aspects such as the presentation, the duration of labour and operative delivery etc. (Table 1) and we have tried to relate these

Table 1. Case material (42 cases).

| | |
|-----------------------------------|----------------------|
| mean age of the mother | 26 yrs (range 18–39) |
| primiparae | 69% |
| delivery at term | 83.3% |
| vaginal delivery | 95.2% |
| cephalic presentation | 100% |
| caesarean section | 2 cases |
| duration of labour below 12 hours | 71.4% |

aspects to the clinical findings at follow-up. As far as the outcome is concerned it should be stressed, however, that five of our cases had an early recurrency of their luxation three to four days following reposition and had to be treated again with temporary packing of the obstructed nasal cavity: in four of them the late results were not satisfactory.

The all over results after 13 to 16 years are summarized in Table 2. On the whole, the clinical outcome – if we consider the functional aspects which is evidently more important – can be considered satisfactory, as in 69% of all our cases rhinoscopy showed that the septum was stable in the corrected position or only slightly

Table 2. Clinical picture after 13-16 years.

| septum | number of cases |
|-----------------------------|-----------------|
| no signs of deviation | 6 |
| slight unilateral deviation | 15 |
| slight bilateral deviation | 7 |
| marked unilateral deformity | 3 |
| marked bilateral deformity | 2 |
| complete obstruction | 5 |

deviated. Moreover, these patients did not complain of a greater incidence of nasal pathology as compared to children of the same age, who had no history of septal deviation at birth.

Conversely, if we consider the group of subjects with marked uni- of bilateral obstruction, we must first stress that nearly all had to some degree an increased incidence of sinusitis and/or otitis; in five cases this pathology was very marked and required intensive and prolonged treatment.

DISCUSSION

There exist some limitations for the evaluation of our data and these are due to the long period of follow-up, which we considered interesting as it afforded the possibility of studying the noses of these patients after they had reached complete maturation. However, we are well aware that other factors (traumatic, etc.) in the patients' history, which the patients themselves or the family might have forgotten, could have influenced the final outcome. Furthermore, the relatively small number of subjects which we have been able to trace after such a long period of time does not allow to establish significant relationships between the factors considered at birth and the late outcome of relocation of the septum. There is, however, one aspect which deserves further investigation, i.e. the outcome of cases where septum reposition at birth has to be repeated due to recurrency of dislocation after some days: we have seen that most of these cases show an unsatisfactory late outcome and we believe that they need a more accurate follow-up in the first month of life and - possibly - further treatment. It is therefore our aim to increase the number of our observations such as to gain more informations on which cases should be considered more "at risk".

We may conclude from the present study that, considering the late outcome of septum reposition at birth, this intervention appears to be fully justified and is able to avoid in a large majority of cases not only external deformities of the nasal pyramid and respiratory obstruction but further the inflammatory alterations connected with this condition.

As far as facial and palatal malformations are concerned we were not able to confirm some data of the literature, but - as has been stated - our numbers are too small to be significant and obviously, there is no possible comparison with an untreated control group.

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