

Three forms are to be met with: (1) the upper-arm type; (2) the lower-arm type; (3) the two preceding combined. The most common is the upper arm type which corresponds in a general way pathologically to Erb's paralysis in the adult. It is with this form that this paper deals.

After reviewing various theories as to the causation of the condition Bullard states that it has been conclusively proved that the injury is due to the stretching of the fifth and sixth cervical nerves in the neck. These nerves may be simply stretched without loss of continuity or they may be ravelled out, some fibres being torn apart and some still holding, or they may be wholly torn asunder. The exact process by which the nerves are damaged is not settled but the injury is probably due to traction powerfully exerted and favourably by the firm resistance or fulcrum against which the pull is made. Traction on the head in the axis of the body is less injurious than when it is made obliquely. Over rotation of the head may also produce the injury. Fixation of the shoulder or shoulders in head presentations; and resistance of the head in breech presentations favour development of the injury. Asphyxia by bringing about the relaxation of the muscles and thus removing their resistance, favours the development of the injury, as the nerves no longer having the support of the muscles, are more easily torn.

The author records 43 cases in which the report of the attending physician at the time of labour was obtainable, and 135 cases in which good histories were obtained from the patients themselves, making a total of 178 cases.

In the first series, delivery was difficult in 15 of them; forceps were used in 28 cases, a rather high proportion. The head presented in 40 cases and the breech in three. In 18 cases the shoulders offered resistance to extraction, in many of the cases there was no resistance encountered.

In the second series of 135 cases, labour was difficult in 79, the head presented in 55, and the breech in 3. Forceps (including 3 on the after-coming head) were used 93 times. The right upper extremity was affected in 92 cases and in the left 72, both the upper limbs in 2 cases and in 11 cases the arm affected is not reported.

Speaking of the clinical conditions it is stated that in the early stages the upper extremity hangs limp, extended, and rotated internally. In typical cases the grasp is impaired and the wrist is not affected. Supination of the fore-arm beyond the median line is impeded; flexion of the fore-arm is impaired though extension is not affected, the arm cannot