Shoulder Dystocia Caused by Axillary Cystic Hygroma

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Cystic hygroma (congenital lymphangioma) is a congenital malformation that presents clinically as a cystic mass containing lymphatic fluid. Cystic hygroma accounts for 6% of all benign childhood tumors.[1]

Cystic hygromas are caused by a lack of drainage of selected efferent lymphatic vessels due to atresia of those lymph channels during early embryologic development. In most cases, the mass is visible at birth, but sometimes it does not become apparent until later. In nearly all cases, it is clinically apparent by 2 years of age.[2]

In the majority of cases (75% to 95%), congenital cystic hygromas occur on the neck, but they can occur in many areas of the body including the axilla, mediastinum, mesentery, internal viscera, bones, parotid glands, and scrotum.[1–4] Of these secondary locations, the axilla is the most common. Between 5% and 25% of cystic hygromas occur in the axilla.[1,2]

Although cystic hygromas are soft and somewhat compressible, they can be quite large. In addition, they can be located such that they interfere with passage of the fetus through the birth canal.

The case reported here describes shoulder dystocia caused by a cystic hygroma of the axilla. The case emphasizes the unexpected occurrence of shoulder dystocia and the need for physicians to be skilled in management of this complication of labor.

Case Report

A 23-year-old woman, gravida 3, para 2, was admitted to the hospital at 39 weeks of gestation in spontaneous labor. Her pregnancy had been uncomplicated. Her largest previous infant weighed 3119 g and was delivered vaginally without difficulty.

Labor was uneventful, and the patient was taken to the delivery room in anticipation of a normal spontaneous vaginal delivery. Delivery of the head occurred without difficulty, but the anterior (right) shoulder could not be delivered. Delivery was ultimately achieved by rotating the posterior shoulder into the anterior position using the technique described by Woods.[5]

On physical examination, the infant was found to have a 6 × 6-cm cystic mass on the right lateral chest wall in the axilla (Figure 1), which prevented full adduction of the infant's shoulder. No other abnormalities were noted.

The mass was clinically identified as an axillary cystic hygroma. No alternative preoperative diagnoses were considered. Excision of the mass was performed at a later date, at which time pathologic examination of excised tissue confirmed the diagnosis of cystic hygroma.

Discussion

Since it is relatively uncommon and there are no known risk factors, the occurrence of congenital cystic hygroma cannot be reliably predicted before delivery. There are a number of reports of intragestational detection of this anomaly by ultrasound,[6–10] but in these cases, the hygromas detected were on the neck. Antepartum ultrasonic detection of hygromas in the axilla, however, is not completely reliable. It should be noted that some cystic hygromas of the neck are associated with chromosomal anomalies, and, therefore, prenatal ultrasonic detection of cystic hygromas, if it occurs, is often an indication for chromosome analysis.[10]

On rare occasions, cystic hygromas have resolved spontaneously.[11] The usual treatment, however, is complete surgical excision.[2,12] Other therapies, such as radiation, injection of sclerosing agents, and aspiration of the lesion, are not effective.[12] Aspiration is indicated, however, as a temporizing measure in the treatment of large cystic hygromas of the neck or chest wall that obstruct the airway or restrict respiratory excursions of the thorax.[11]

The delivery physician should also be aware that the

continued on page 528

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continued from page 524

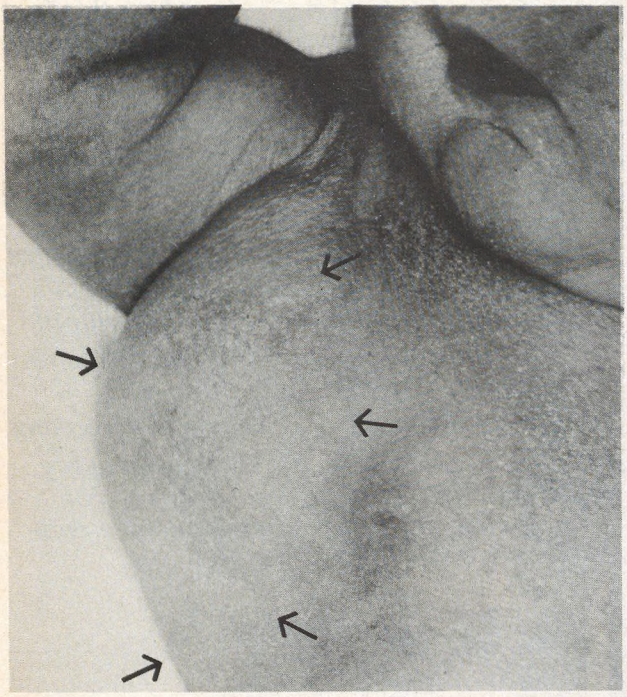

Figure 1. Cystic hygroma of right axilla measuring 6 × 6 cm. The mass prevented adduction of the right shoulder, which was the anterior shoulder during delivery. This resulted in shoulder dystocia.

appearance of a cystic hygroma can cause extreme anxiety and embarrassment for parents of affected children.[13] Therefore, although excision may be delayed until months after birth to allow the child to grow larger, thus facilitating surgical removal of the lesion, removal should be carried out as soon as it is technically feasible.

This is the first reported case of shoulder dystocia or difficult delivery due to cystic hygroma. Although cases of cystic hygroma have been reported in the literature in which incidental mention is made of the circumstances surrounding delivery, these reports included only cases of cystic hygroma of the neck.[8,9] No problems with delivery were noted in these reports.

It is possible that the difficult shoulder delivery in the present case was due only to the size of the infant, since the baby weighed 3771 g (650 g more than the mother's largest previous child), and half of shoulder dystocias occur in infants who weigh less than 4000 g (8.8 lbs).[14] The axillary mass prevented adduction of the anterior (right) shoulder, however, thus impeding passage of the anterior shoulder under the pubic arch. This suggests that the hygroma contributed to the shoulder dystocia and may have been the sole cause.

Key words. Lymphangioma; dystocia; labor complications; delivery.

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