Answers to Medical Quiz

A1. Figure 1 is an ultrasound and figure 2 is MRI.

A2. A large left cervical cystic lesion with infected fluid is revealed in the ultrasound. The swelling is extending in the retropharyngeal space as seen in MRI.


DISCUSSION

The branchial clefts, also known as pharyngeal clefts, develop at the fourth week of embryonic life. The branchial clefts contribute to the development of the branchial (or pharyngeal) arches, which lead to the formation of different components of the thorax, the head and the neck1-3.

A branchial cleft cyst is a type of congenital birth defect known as branchial cleft remnant resulting in swelling of one or both sides of the cervical region. Embryonic anomalies of the branchial cleft are arising from the second branchial arch in 90% of the cases1-3.

Branchial cleft fistula on one or both sides of the neck is another rare developmental anomaly of branchial clefts. Second arch anomalies are the most common types, and they are classified into four types: Type 1 lies anterior to the sternocleidomastoid muscle; Type II passes deep into the sternocleidomastoid muscle; Type III passes between the external and internal carotid vessels, and Type 4 lies medial to the carotid arteries4-6.

Branchial cleft cysts are the most common embryonic anomaly resulting in swelling at cervical region. The incidence of unilateral branchial cleft cysts is unknown. On the other hand, the incidence of bilateral branchial cleft cysts is approximately 2% to 3% of the cases4-6.

Most presentation of branchial cleft cysts are asymptomatic solitary painless masses. They may become inflamed as a result of upper respiratory tract infection5-6.

Symptoms depend on the size and the anatomical extension of the branchial cleft cyst. Symptoms including dysphagia, dysphonia, dyspnea and stridor may occur as a result of pressure effect of these branchial cleft cysts5-6.

Aspiration of the branchial cleft cyst is helpful to inject antibiotic therapy for infected cysts. Antibiotics are required to treat infections of branchial cleft cysts before the definitive treatment. Surgical excision is the definitive treatment for branchial cleft cysts.

Sclerotherapy, using ultrasound guidance with OK-432 (Picibanil) has been reported to be an effective treatment in selective cases of branchial cleft cysts7-9.

CONCLUSION

Branchial cleft cysts are rare embryonic anomalies in the cervical region. Most cases of branchial cleft cyst present as painless swelling. Ultrasound and MRI or CT scan is essential for diagnosis. Surgical excision is the treatment of choice with excellent outcome.

Potential Conflicts of Interest: None.

Competing Interest: None.

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Ethical Approval: Approved by the Department of Pediatrics, Salmaniya Medical Complex, Bahrain.

REFERENCES