Benign teratoma almost equivalently diagnosed with CT scan. CT scan usually showed a mass consisting of fluid and fat density. Calcification is demonstrated almost in half of these tumors. Tumor markers include α-fetoprotein and β-subunit of human chorionic gonadotropin. With above CT findings and normal tumor markers, complete surgical excision is suggested without biopsy. These tumors are usually bulky and approach for surgical excision is usually median sternotomy.

MRI is a useful tool for diagnosis of mature teratoma and for assessing the relationship of the tumor to the vital structures and great vessels in the mediastinum. Ultrasonography is useful for evaluating neck mass especially in fetuses and neonates.

**CASE REPORT**

A 21-year-old female was admitted with anterior neck mass. On physical examination, a large fluctuant and painless mass was observed at the base of neck. A thyroid scan showed normal thyroid size with lesion compressing left lateral aspect of right lobe of thyroid. Ultrasonography showed a lesion with cystic and solid component. The size of cyst in neck was 23 × 48 cm.

CT studies of neck and thorax showed a lobulated cervico-mediastinal mass lesion. Lab data showed normal LDH, BHCG and Alfa Fetoprotein.

Intra-operatively, the lesion extended from neck to middle of mediastinum. The lesion was excised completely...
Sadrizadeh, et al.: Cervico mediastinal teratoma in adult

with median sternotomy and lateral neck incision. Histopathology examination revealed neoplastic lesion composed of cystic spaces lined with keratinized stratified squamous and respiratory epithelium with hair follicles, sebaceous glands, eccrine and mucinous glands, pancreatic tissue, mature fatty tissue, hyaline cartilage and smooth muscle bundles in the wall.

The other case was a 42 year-old female admitted because of a left anterior neck mass. On physical examination, a large fluctuant and painless cystic mass was present at the base of neck. The lesion was seen in the chest X-ray [Figure 1]. CT scan study of neck and thorax showed a lobulated cervico-mediastinal mass lesion. The size of mass in the mediastinum was 14/5 × 6/6 cm and in the neck was 4/5 × 5 cm [Figure 2].

Intra-operatively the lesion was found extending from neck to middle mediastinum. The lesion was excised completely with median sternotomy.

Histopathology examination revealed neoplastic lesion composed of cystic spaces lined with keratinized stratified squamous and respiratory epithelium with hair follicles, sebaceous glands, eccrine and mucinous glands [Figure 3]. Diagnosis of both cases was mature teratoma.

DISCUSSION

Teratoma in cervico-mediastinal region in adult patients is very rare. The most reports had been in newborns and infancy. Castellote et al. classified cervicothoracic lesions as traumatic lesions, inflammatory lesions, congenital lesions, malignant tumors and benign tumors. The most common cervicothoracic mass in children is lymphangioma and other congenital lesions are vascular anomalies, thymic cyst and hemangioma. Other lesions which can manifest as cervicothoracic masses are: Infective disease, fibromatosis, lipoma, lipoblastoma and nerve sheath tumors can occur as cervicothoracic tumors. Lymphoma, thyroid carcinoma, neuroblastoma, and chest wall tumors are malignant cervicothoracic tumors. Cervicothoracic lesions occurs after trauma (Pneumomediastinum, pharyngeal pseudodiverticulum, foreign-body granuloma of esophagus, and hematoma) and these lesions may mimic as traumatic cervicothoracic lesions.[5]

Beji et al. reported hydatid cysts in adult patients as cervico-mediastinal masses.[6] Martino et al. in retrospective study reviewed a series of teratomas of the neck and mediastinum. They reviewed the patients with cervico-mediastinal tumor over the 10 years. They recorded prenatal diagnosis, perinatal treatment, radiologic and clinical features, pathology, surgical treatment and results in cervical and mediastinal teratomas. In this period they treated 11 children (6 male and 5 female) having cervicomediastinal teratomas. 5 babies had cervical teratomas (two cases extended into the anterior mediastinum). The diagnosis was confirmed by increased AFP and imaging. All tumors were removed surgically.[7]
Sadrizadeh, et al.: Cervico mediastinal teratoma in adult

Chappuis reports 8 patients with congenital cervicomediastinal lesion that compress the tracheo-broncheal area. These patients presented with respiratory distress. The histopathology was teratomas.\[9]\n
Yamaguchi et al. reported excision of cervico-mediastinal tumor with thoracoscopy. The mediastinal portion was excised with thoracoscope and the cervical portion was excised from cervical incision.\[9]\n
The patients were presented with mass in cervico-mediastinal region, benign teratoma may be diagnosis. Surgical approach can be cervical, mediastinal or both, due to extension of tumor in neck and mediastinum. Review of other reports show that, teratoma in cervico-mediastinal region is very rare. We report two adult patients with cervico-mediastinal tumors diagnosed as teratoma.

**CONCLUSION**

We conclude that in adult patients who present with cervico-mediastinal mass, benign teratoma could be one of a differential diagnosis although it is a rare presentation.

We recommend that for those patients undergoing surgery for cervicomediastinal mass, if maximum part of mass is in mediastinum, the first incision should be sternotomy and excision of both segments of mass. If removal of the mass is difficult from sternotomy incision, the incision can be extended to the neck.

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**REFERENCES**

1. Allen MS, Trastek VF, Pairolero PC. Benign germ cell tumors of the mediastinum. In: Shields TW, editor. General Thoracic Surgery. 7th ed. Philadelphia: Wolters Kluwer/Lippincott Williams and Wilkins, 2009. p. 2389-95.
2. Alimemeti M, Alimehmeti R, Ikonomi M, Saraci M, Petrela M. Cystic benign teratoma of the neck in adult. World J Clin Cases 2013;1:202-4.
3. Kesler KA. Germ cell tumors of the mediastinum. In: Patterson GA, Pearson FG, Cooper JD, Deslauriers J, Rice TW, Luketich JD, et al. editors. Pearson’s Thoracic and Esophageal Surgery. 3rd ed. Philadelphia: Churchill Living Stone; 2008. p. 1615-21.
4. Hazama K, Miyoshi S, Ohta M, Matsuda H. Matured mediastinal teratoma extending into the cervical neck of an adult. Interact Cardiovasc Thorac Surg 2003;2:265-7.
5. Castellote A, Vázquez E, Vera J, Piqueras J, Lucaya J, García-Peña P, et al. Cervicothoracic lesions in infants and children. Radiographics 1999;19:583-600.
6. Beji M, Ben Messaoud M, Louzir B, Bouzaidi K, M’hiri Ben Rhouma N, Cherif J, et al. Cervico-thoracic localization of a hydatid cyst. J Radiol 2004;85:135-7.
7. Martino F, Avila LF, Encinas JL, Luis AL, Olivares P, Lassaletta L, et al. Teratomas of the neck and mediastinum in children. Pediatr Surg Int 2006;22:627-34.
8. Chappuis JP. Tracheobronchial compression by congenital tumors. Chir Pediatr 1984;25:279-83.
9. Yamaguchi M, Yoshino I, Kameyama T, Osoegawa A, Tagawa T, Maebara Y. Thoracoscopic surgery combined with a supraclavicular approach for removing a cervico-mediastinal neurogenic tumor: A case report. Ann Thorac Cardiovasc Surg 2006;12:194-6.

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