of the humerus, aplasia of the radius (as in this case) and phocomelia.<sup>[3]</sup> In a clinical and genetic study (n = 55), all cases of HOS had upper limb involvement, the left side was more severely affected, the females had more severe defects, and cardiac defects were seen in 95% of familial cases.<sup>[4]</sup> Cardiac defects included ASD (34%), ventricular septal defect (25%), ECG changes (35%), and asymptomatic conduction disturbance with variable degree of AV block. Even patients with minimal upper limb defects should receive a thorough cardiac examination and possibly an echocardiogram, because the severity of the limb defects does not correlate with the severity of the cardiac defect. An ASD is sometimes associated with abnormalities of venous return such as anomalous pulmonary venous drainage, inferior vena caval interruption, and persistent left superior vena cava. Correct preoperative diagnosis of systemic and pulmonary venous anomalies is essential for appropriate cannulation and management during CPB.<sup>[5]</sup> The peripheral venous access and arterial cannulation may be difficult in patients with significant limb abnormalities. Upper limb defects may make fixation of an appropriate size BP cuff difficult, and inaccurate pressures may be displayed by non-invasive monitors. Two of the Holt and Oram's original family had hypoplastic peripheral vessels which prevented cardiac catheterization.<sup>[2]</sup> The use of ultrasound-guided cannulation may improve success rate in such patients.<sup>[6]</sup> In our case, we did not find any cardiac or skeletal abnormality in any of the parents which suggests a spontaneous genetic mutation in the baby. To summarize, in patients of HOS, the potential for difficult arterial and venous cannulation, difficult intubation, and problem with non-invasive BP monitoring must be kept in mind.

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#### REFERENCES

- 1. Girish BN, Rajesh S, Somasekharam P, Kumar P. Anaesthetic management of emergency cesarean section in a patient with Holt Oram syndrome. J Anaesthesiol Clin Pharmacol 2010;26:541-3.
- 2. Holt M, Oram S. Familial heart disease with skeletal malformations. Br Heart J 1960;22:236-42.
- Oğur G, Gül D, Lenk MK, Imirzalioğlu N, Alpay F, Oğur E. Variable clinical expression of Holt-Oram syndrome in three generations. Turk J Pediatr 1998;40:613-8.
- 158

- 4. Newbury-Ecob RA, Leanage R, Raeburn JA, Young ID. Holt-Oram syndrome: A clinical genetic study. J Med Genet 1996;33:300-7.
- Varma PK, Padmakumar R, Harikrishnan S, Koshy T, Neelakandhan KS. Holt-Oram syndrome with hemiazygous continuation of inferior vena cava. Asian Cardiovasc Thorac Ann 2006;14:161-3.
- 6. Hosokawa K, Shime N, Kato Y, Hashimoto S. A randomized trial of ultrasound image-based skin surface marking versus real-time ultrasound-guided internal jugular vein catheterization in infants. Anesthesiology 2007;107:720-4.

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# An unusual case of high central venous pressure

The Editor,

We describe the case of a 50-year-old male suffering from cirrhosis due to alcoholic hepatitis; the patient was admitted to hospital because of generalized deterioration. On admission, the patient was hypotensive (systolic arterial pressure 80 mmHg), stuporous and unable to report symptoms. However, distended neck veins were noticed and a physical examination revealed the presence of ascites. Since no peripheral access was accessible, a central venous catheter was inserted to rehydrate the patient, to administer intravenous therapy and to monitor the central venous pressure (CVP). A chest X-ray was then performed to check the placement of the catheter, which showed no abnormal findings. However, a CVP *P* value of 27 mmHg was noticed and a normal CVP waveform was detected, with "a" and "v" wave clearly represented. A transthoracic echography was then carried out, revealing presence of a mass in the right ventricle [Figures 1 and 2]. The right ventricle was enlarged and occupied by an echogenic mass. The mass appeared tightly attached to the right ventricular wall and to the tricuspid valve, causing prolapse of the tricuspid septal leaflet.



**Figure 1:** Parasternal short axis view. Metastasis occupying the right ventricle (RV = Right Ventricle; Mts = Metastasis)

Five years earlier the patient had undergone colon surgery because of cancer. Therefore, we assumed that the patient had suffered from a hematogenous spread of the colorectal cancer. Despite all medical efforts, the patient died 10 days later because of liver insufficiency. The autopsy confirmed the presence of a massive metastasis in the right ventricle, originating from an intestinal adenocarcinoma.

Cardiac tumors are a rare occurrence in clinical practice. Cardiac malignancies are encountered in about 1.23% of post mortem series, compared with 0.02-0.056% of primary cardiac tumors.<sup>[1]</sup> One-fifth of all patients with metastatic cancer are affected by cardiac metastases;<sup>[1,2]</sup> lung carcinoma represents the most common primary tumor, while melanoma is the neoplasm with the greatest rate of cardiac involvement (50% of patients).<sup>[1,3,4]</sup>

Cardiac malignancies take their course so fast that patients are often asymptomatic.<sup>[1,5]</sup> When present, most common signs and symptoms are heart failure, arrhythmias, cardiac tamponade, and embolisms.<sup>[1,5]</sup> Metastatic tumors of the heart occur more often than primary ones; however, infiltration of the right heart by a metastatic colon cancer is not common. To our knowledge, only 11 cases have been reported in scientific literature.<sup>[4,6-15]</sup> The present case represents another evidence that colon malignancies may affect the right heart, so that a suspicion has to be held when treating patients with reported colon cancer who present with abnormal findings related to heart involvement.

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Figure 2: Subcostal view. Septal leaflet prolapse of the tricuspid valve (RA=Right Atrium; MTS = Metastasis; TV = Tricuspid Valve)

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#### REFERENCES

- Ekmektzoglou KA, Samelis GF, Xanthos T. Heart and tumors: Location, metastasis, clinical manifestations, diagnostic approaches and therapeutic considerations. J Cardiovasc Med 2008;9:769-77.
- Sarjeant JM, Butany J, Cusimano RJ. Cancer of the heart: Epidemiology and management of primary tumors and metastases. Am J Cardiovasc Drugs 2003;3:407-21.
- Reynen K, Köckeritz U, Strasser RH. Metastases to the heart. Ann Oncol 2004;15:375-81.
- Choi PW, Kim CN, Chang SH, Chang WI, Kim CY, Choi HM. Cardiac metastasis from colorectal cancer: A case report. World J Gastroenterol 2009;15:2675-8.
- 5. Debordeau P, Gligorov J, Teixeira L, Aletti M, Zammit C. Malignant cardiac tumors. Bull Cancer 2004;91 Suppl 3:136-46.
- Testempassi E, Takeuchi H, Fukuda Y, Harada J, Tada S. Cardiac metastasis of colon adenocarcinoma diagnosed by magnetic resonance imaging. Acta Cardiol 1994;49:191-6.
- Nishida H, Grooters RK, Coster D, Soltanzadeh H, Thieman KC. Metastatic right atrial tumor in colon cancer with superior vena cava syndrome and tricuspid obstruction. Heart Vessels 1991;6:125-7.
- Oneglia C, Negri A, Bonora-Ottoni D, Gambarotti M, Bisleri G, Rusconi C, et al. Congestive heart failure secondary to right ventricular metastasis of colon cancer. A case report and review of the literature. Ital Heart J 2005;6:778-81.
- Puvaneswary M, Thomson D, Bellamy GR. Cardiac metastasis from carcinoid tumor: Magnetic resonance imaging findings. Australas Radiol 2004;48:383-7.
- Makhija Z, Deshpande R, Desai J. Unusual tumours of the heart: Diagnostic and prognostic implications. J Cardiothorac Surg 2009;4:4.
- 11. Zipoli A, Bartoli P, Fradella G, Sansoni M, Brandinelli A, Mazza F, *et al.* Right atrial metastasis as an initial clinical manifestation of adenocarcinoma of the colon. Ann Ital Med Int 1994;9:150-2.
- 12. Teixeira H, Timoteo T, Marcao I. Cardiac metastases from a colonic tumor. Acta Med Port 1997;10:331-4.
- 13. Choufani EB, Lazar HL, Hartshorn KL. Two unusual sites of

colon cancer metastases and a rare thyroid lymphoma. Case 2. Chemotherapy-responsive right atrial metastasis from colon carcinoma. J Clin Oncol 2001;19:3574-5.

- Koizumi J, Agematsu K, Ohkado A, Shiikawa A, Uchida T. Solitary cardiac metastasis of rectal adenocarcinoma. Jpn J Thorac Cardiovasc Surg 2003;51:330-2.
- 15. Patel SA, Herfel BM, Nolan MA. Metastatic colon cancer involving the right atrium. Tex Heart Inst J 2012;39:79-83.

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# Whistling from deep within!

#### The Editor,

Aspiration of a plastic whistle can give rise to a variety of respiratory symptoms, but whistling sound during inspiration is uncommon.<sup>[1]</sup> A 13-year-old male presented with complaint of non-productive cough and a history of aspirating a plastic whistle three weeks before. Normally, a whistle is blown by blowing out into it. This boy had put the whistle in his mouth in reverse, and tried to produce the sound by sucking air through it resulting in aspiration. Interestingly, a whistling sound was heard during forceful inspiration. On auscultation, crackles were heard over right lower chest. Chest X-ray was normal but computed tomography scan [Figure 1] revealed the plastic whistle lodged in the right main bronchus. Whistling sound with inspiration suggests that the whistle is lodged in a major airway and none of its end is lying against airway wall or blocked by mucus allowing passage of enough air to produce the



Figure 1: Arrow showing a plastic whistle (inset) lodged in the right main bronchus

sound. If the whistle is in the trachea, it will require less effort to produce a sound as compared to the effort required to produce the same sound if it were stuck more distally in the bronchus. The whistle was taken out by rigid bronchoscopy under general anesthesia. Such an impaction can lead to various complications like lung collapse if the whistle lumen gets blocked due to mucus and an early removal of such an impaction should be done to avoid an emergency.

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#### REFERENCE

1. Tariq SM, George J, Srinivasan S. Inhaled foreign bodies in adolescents and adults. Monaldi Arch Chest Dis 2005;63:193-8.

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