Case report

Persistent cough - A rare presentation of hepatocellular carcinoma

O.G. Sandahl\textsuperscript{a,}*, O. Hilberg\textsuperscript{a}, F. Rasmussen\textsuperscript{b}, A. Løkke\textsuperscript{a}

\textsuperscript{a} Department of Respiratory Diseases and Allergy, Aarhus University Hospital, Nørrebrogade 44, 8800 Aarhus C, Denmark
\textsuperscript{b} Department of Radiology, Aarhus University Hospital, Nørrebrogade 44, 8800 Aarhus C, Denmark

ABSTRACT

Coughing is a very common condition, accounting for frequent visits in general practice. In this case report, we found the cause of persistent cough to be hepatocellular carcinoma, located in close proximity to the diaphragm. After the tumor had been treated with chemoembolization the coughing disappeared. After the common causes for persistent cough have been ruled out, the clinician could consider other, rarer, conditions as the cause of the coughing, including affection of the diaphragm.

A CT scan of the chest and upper abdomen showed a 4.5 cm × 6.0 cm focal liver lesion in the cranial part of the right lobe of the liver. No abnormalities in the thoracic cavity were found. A liver biopsy revealed the lesion to be hepatocellular carcinoma, stage T1N0M0, Child-Pugh A, score 5. The patient was still suffering; from coughing at this point.

The patient was treated with two series of chemoembolization (Figs. 1 and 2 – before and after treatment). Cemoembolization is first line non-curable treatment for HCC, aiming to extend life and to potentially downstage the tumor to permit transplantation or resection. Two months after the chemoembolization the patient was feeling well and the coughing had disappeared.

Renewed test of lung function now showed improvement, with FEV1 (2.35L, 76%), FVC 3.92 (91%) and an obstructive FEV1/FVC ratio of 0.66. The restrictive pattern shown before chemoembolization could be caused by the tumors close proximity to the diaphragm.

In this case story presented, we believe that the persistent cough was caused by the hepatocellular carcinoma's very close proximity to the diaphragm, possible affecting the neurogenic pathways or the cough center via the vagal nerve, although possible systemic secretion from the carcinoma causing coughing cannot be completely ruled out.

After the tumor had been treated with chemoembolization the coughing disappeared. According to international guidelines, in non-smokers, with normal chest x-ray, and no ongoing treatment with ACE-inhibitors, the diagnostic approach should focus on detecting and treating GERD, UACS, asthma or chronic bronchitis. These conditions can be seen alone or in combination with each other [3].
One case-report has previously described hepatocellular carcinoma as the rare cause of dyspnea, but coughing was not present in that case [6].

This case-report describes as the first hepatocellular carcinoma as a possible cause for persisting cough.

We acknowledge that the improvement of cough with chemoembolization doesn’t prove causality, however we believe the case illustrates that when normal diagnostic approach to persisting cough has been completed without success, it can be worth investigation other avenues, including affection of the diaphragm.

References

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