Reviewer’s report

Title: A distinctive colour associated with high iodine content in malignant pleural effusion from metastatic papillary thyroid cancer: A case report

Version: 1 Date: 24 February 2013

Reviewer: Pyng Lee

Which of the following best describes what type of case report this is?: Unexpected or unusual presentations of a disease

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

Interesting case report

1) can the authors provide a table summarizing reported cases of metastatic thyroid carcinoma with pleural effusions in particular fluid biochemistry, thyroglobulin levels (absolute and ratio): Mundi MS, Lopresti J, Lee WA: Utility of pleural fluid Thyroglobulin (Tg) measurement in malignant pleural effusion from metastatic papillary thyroid cancer (MPTC). The Endocrine Society 90th Annual Meeting, June 12-15, 2008, San Francisco, CA since authors recommend on page 8 as a diagnostic test. Also I note that pH and glucose values were low. was cytology positive?

2) description of CT findings, was the parietal and visceral pleura thickened, and did they appear homogenous in non-contrast phase akin to amiodarone lung
(where iodine content is high).

3) Role of total body radioactive Iodine scan in diagnosis and therapy. I presume this patient had probably received maximum dose of iodine as therapy, was chemo given cisplatin/ doxorubicin. Can the authors explain why Pazopanib a multi-targeted receptor tyrosine kinase inhibitor was started were relevant mutations identified?

4) Role of PET CT in metastatic thyroid carcinoma to the pleura. I am surprised that he had avid FDG uptake as the lung metastases are often miliary hence too small to take up FDG.

5) Figure showing brownish fluid, it can be further improved by showing another tube with iodine for comparison. Other causes of brownish fluid with the pleural fluid characteristics would be chronic empyema, liver amoebiasis rupturing through into pleural space (anchovy sauce), anaerobic empyema.

6) Pleuroscopy revealed trapped lung as the parietal and visceral pleura looked thickened without lung expansion following fluid drainage, was there CXR post pleuroscopy, did the lung expand as it would affect result of talc pleurodesis.

7) Pleural fluid iodine content was high, can the authors clarify if this was intracellular/ extracellular?

8) it would be interesting to have a cytological / histological slide showing papillary carcinoma.

Quality of written English: Acceptable

Declaration of competing interests:

'I declare that I have no competing interests'