Reviewer’s report

Title: Metastatic malignant melanoma with neuroendocrine differentiation – report of a rare case and review of the literature

Version: 0 Date: 25 Sep 2019

Reviewer: Deborah Jebakumar

Reviewer's report:

1. Do you believe the case report is authentic?
   Yes

2. Do you have any ethical concerns? Please consider if local Institutional Review Board approval or ethical approval was obtained (if appropriate) and if the patient (or their parent or guardian in the case of children under 18) gave written, informed consent to publish this case and any accompanying images. A statement to this effect should appear in the manuscript.
   Comments: No concerns. IRB approval and patient's next of kin consent has been documented.

3. Does the Introduction explain the relevance of the case to the medical literature?
   Yes

4. Does the article report the following information? Where information is missing, please specify.
   a. The relevant patient information, including:
      - De-identified demographic information (age, gender, ethnicity) YES
      - Main symptoms of the patient YES
      - Medical, family and psychosocial history YES
      - Relevant past interventions and their outcomes YES
   b. The relevant physical examination findings YES
   c. Important dates and times in this case (if appropriate, organized as a timeline via a figure or table); if specific dates could lead to patient identification, consider including time relevant to initial presentation, i.e. initial presentation at T = 0, follow up at T = 1 month. YES
   d. Diagnostic assessments, including:
      - Diagnostic methods YES
      - Challenges (e.g., financial, language/cultural) None
      - Reasoning and prognostic characteristics (e.g., staging), where applicable YES
   e. Types and mechanism of intervention YES
f. A summary of the clinical course of all follow-up visits YES

Comments: None

5. Is the interpretation (discussion and conclusion) well balanced and supported by the case presented? YES

Comments:

6. Is the anonymity of the patient protected? Please consider any identifying information in images such as facial features or nametags, whether the patient is named etc. If not, please detail below. YES

7. Is the Abstract representative of the case presented? YES

Comments:

8. Does the case represent a useful contribution to the medical literature? YES

Comments:

9. Additional comments for the author(s)?

Overall, an interesting case report. well written and descriptive. Good flow.
A few changes and suggestions are outlined below:

Abstract:

pg 3, line 19(35) - substitute ":" (colon) with comma ","
pg 3, line 22 (36) - expand "INSM1" - its the first time it is being described and its not a commonly used antibody

Keywords: consider using carcinoma of unknown primary instead of/or in addition to neuroendocrine cancer

Background: OK

Case Presentation:

Pg 6, line 5 (82): spelling correction "polycythemia"
Pg 6, line 10 (84): suggest expanding abbrevations "CT", since it is the first time it is being used
Pg 6, line 17 (87): suggest substitution of "costa 8" with either 8th rib or costal margin of the 8th rib as appropriate
Pg 6, line 22 (89): consider change to " 10mm large lesion in the left adrenal gland". Did this nodule increase in size between that time? If so, please indicate so.
Pg 6, line 27 (91): consider change from "To conclude" to "To summarize"
Pg 6, line 31 (93): suggest change from "core needle biopsy towards" to "core needle biopsy of the chest wall...

Pg 6, line 34 (94): suggest change from "was put forward" to "was rendered"

Pg 6, line 36 (95): Suggest change from "at our tertiary unit" to "to our tertiary unit".

Pg 6, line 41-44 (97-98): consider change to "round to slightly polygonal nuclei, focally pleomorphic...". was any nucleoli or pigment detected in this biopsy? please clarify.

Pg 7, line 2-3(106): Insert " was" .., but was strongly positive for Vimentin.

Pg 7, line 4-19 (107-113): consider making this into 2 sentences. suggest: Scattered tumor cells were positive for Cytokeratin Oscar. The tumor cells were negative for ......

Pg 7, Line 39 (121): consider change from "ordered" to "performed"

pg 7, line 51 (125-126): suggest change from "radiation towards the pelvis" to "radiation directed at the pelvis..."

pg 7, line 56-58 (128-129): suggest paraphrasing, histological evaluation of material decalcified by formic acid and microwave treatment revealed....

pg 8, line 1 (130) : consider change from "infiltration of a nest-forming tumor" to "infiltration by a nest-forming tumor"

Pg 8, line 25 (140): suggest change to " The patient subsequently developed bilateral..."

Pg 8, line 29 (142): suggest change from "lobular pneumonia" to "lobar pneumonia"

Pg 8, line 34 (144): suggest change to "Ultimately, he developed septicemia..."

pg 8, line 36 (145): suggest change from "after the original disease presentation" to "after initial presentation".

Pg 9, line 24 (156): clarify clinical material - does this refer to published literature or manufacturer's data/research?

Pg 9, line 43 (163): suggest using either "putting forward a diagnosis" OR "rendering a diagnosis"

Pg 9, line 45 (164): consider substituting "suboptimal" instead of "poorer"

Pg 9, line 55 (169): please expand H & E, has not been used previously in the body of the manuscript

pg 10, line 2 (172): remove "s" from immunostainings - use "immunostaining"

Pg 10, line 28 (182): consider change from "general lack of descriptions" to "lack of published literature"

List of abbreviations: OK

Declarations: OK

Figure legends: OK

Table: OK
Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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No