A 58-year-old male complains of multiple lobulated reddish to bluish swellings over the tongue and lower lip for the last two years. No associated pain or paresthesia, no history of discharge and no history of trauma except for the discomfort caused by lobulated masses. The patient has an unremarkable medical history; no known allergies; and is not taking any medications.

**Extra-oral examination**
Lobulated masses of deep reddish to bluish lesions seen over lower lip.

**Intra-oral examination**
Lobulated masses of deep reddish to bluish lesions seen over lower lip and tongue region. The lesions are soft in consistency and have a smooth surface.

**Questions**
1) The clinical differential diagnosis may include:
   a) Hemangioma
   b) HIV-related lesion
   c) Lymphangiomatosis
   d) Drug allergy
   e) Multiple mucosal neuromas

2) Which of the following diagnostic tests may be useful (circle all that apply)?
   a) Pressure test
   b) Serology
   c) Biopsy

*Turn to page 12A for the answers*
Identify the swellings

1) The clinical differential diagnosis may include:
   a) Hemangioma
   b) HIV related lesion
   c) Lymphangangioma
   d) Drug allergy
   e) Multiple mucosal neuromas

2) Which of following diagnostic tests may be useful (circle all that apply)?
   a) Pressure test
   b) Serology
   c) Biopsy

Answers
1) a
2) a

Going further...
The following tests were performed:
• Pressure test = positive
• ELISA test = negative
• Histopathology as shown below

5) The histopathological differential diagnosis is which of the following?
   a) Pyogenic granuloma
   b) Capillary hemangioma
   c) Hemangiospericytoma
   d) Hemangioendothelioma

4) Are the following statements about hemangioma true or false?
   a) Pressure test positive
   b) ELISA positive
   c) Histopathology shows endothelial proliferation
   d) Histopathology shows chronic inflammatory cell infiltrate
   e) Histopathology shows stag horn pattern of vascular channels

5) All of the following statements are true about hemangioma except:
   a) A true neoplasm
   b) Hamartoma
   c) Common in darker-skinned individuals
   d) Three times more common in females

6) Are the following statements about Hemangioma true or false?
   a) Hemangiomas are present since birth
   b) Hemangiomas are more common in the head and neck regions and rare in the oral cavity
   c) Hemangiomas can be seen centrally
   d) Central hemangioma can have sunburst appearance

7) Hemangioma is a feature of each of the following syndromes except:
   a) Struge-Weber syndrome
   b) Rendu-Osler-Weber syndrome
   c) Kasabach–Merritt syndrome
   d) Gorlin-Goltz Syndrome

Discussion
Hemangioma is a hamartoma. It is never seen at birth but develops within the first year of life. It is more common in the head and neck regions and rare in the oral cavity. It is more common in females. Its occurrence is more frequent in white-skinned individuals. It can be seen centrally. Radiographically, central lesions can have a sunburst or honeycomb pattern.

Histopathologically, it shows areas of endothelial proliferation. Hemangioma is associated with many syndromes like Struge-Weber, Rendu Osler Weber, Kasabach–Merritt.

Treatment modalities includes injection of sclerosing agents, intralesional injection of corticosteroids, flash lamp pulsed dye laser and embolization.

Answers
3) b; 4) a) true, b) false  c) true, d) false, e) false; 5) c; 6) a) false, b) true, c) true, d) true; 7) d

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