4 Gy single fraction palliative radiotherapy for the treatment of painful recurrent soft palate carcinoma by high-dose-rate mold brachytherapy: A case report

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賴亭蓉 (Int. C組)

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Introduction
1. Treatment choices for recurrent head and neck cancer (occurrence rate: 20-40 %)
   1. Curative surgery: Tumor spread and patient’s condition → often not possible
   2. Radical course of external beam radiotherapy:
      - Causing excessive morbidity
2. Re-irradiation with high dose
   1. After loading iridium 192 implants:
      - Limited treatment with minimal radiation to the surrounding tissue
   2. Combining a mold and a remote after loading unit with an iridium 192 microsource:
      - Less invasive
      - For superficial oral carcinoma
2. Purpose:
   使用4 Gy single fraction high-dose-rate mold brachytherapy作爲painful recurrent soft palate carcinoma之保守療法的病例報告。

Case report
* 73 y/o male
   April 2000: SCC, right soft palate, staged as T2N0M0
   → primary radiation therapy, external beam irradiation (60Gy/ 30 fractions/ 45 days )
   with a 4 MV beam by opposed lateral portals
   → tumor disappeared macroscopically
   August 2000: recurrent carcinoma, right soft palate (原放射線照射處)
   → external beam irradiation (30 Gy/ 15 fractions/ 23 days) with a 4 MV beam by opposed lateral portals
   → no change in tumor size
   March 2001: soft palate pain, tumor regrowth, CT showed painless multiple bone metastases
   → high-dose-rate mold radiotherapy with Microselectron-HDR, as palliative radiotherapy
   → tumor did not increase in size; reduction of pain, improved eating ability
   August 2001: died of interrecurrent disease with pleural metastases
* High-dose-rate mold radiotherapy:
1. Mold
   ① resin dental mold to fit the jaw
   ② 4 flexible parallel afterloading tubes, 10mm apart from each other, 5mm away from mold surface
   ③ thickened mold surface to minimize radiation to tongue and mandible
2. Dose
   理想上是使用12Gy, 3 times in 1 week, 但因爲patient的狀況不佳，只能使用4 Gy
Discussion
1. First primary head and neck tumors → radiotherapy or surgery
2. External beam irradiation:
   (1) 治療 oral cavity, pharynx, and larynx carcinomas 时, pharynx 常在放射線的治療範圍內
   (2) 即使是最小劑量也常會超過 50 Gy
3. Second primary tumor or recurrent tumor
   (1) Re-irradiation with optimum dose external beam irradiation
      - 要完全治癒 tumor 不可能不造成 excessive morbidity
   (2) Brachytherapy
      - 是比較能被接受的, 因為其 target 較小, 適應性高, 且可使用 mandibular lead shielding 來避免 osteoradionecrosis 的發生
      - 有人建議用來治療早期 velotonsillar area 的 second primary tumors
4. High-dose-rate mold brachytherapy
   (1) Early-staged cancers: 有些報告指出可達到一定程度的控制效果
   (2) Oropharynx cancer, early stage or recurrent: 本篇作者認為可作爲 recurrent cancer 的保守療法, 因為在這個病例中, 雖然 tumor 沒有變小, 但減輕的疼痛已大為提升了病人的生活品質。
5. 曾有報告提出對於 metastatic bone pain, a single fraction of 8 Gy 是安全而有效的。同理, 對於 painful recurrent soft palate tumor, 4 Gy single fraction high-dose-rate mold brachytherapy 也可能是有幫助的。
6. 綜合上述, mold therapy 因較不具侵犯性, 且為 short duration, 所以適用於緩解 recurrent cancer 疼痛。但病例數還太少, 還不能下定論。有待深入探討的觀點包括: 安全性、效率、劑量、間隔等。

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<td>1</td>
<td>開於 oropharyngeal carcinoma 的敘述，以下何者為非？&lt;br&gt;(A) 因位於口腔後方，病人不易察覺，而常延誤診斷與治療&lt;br&gt;(B) 其 tumor size 比發生於口腔前方的 tumor size 大，且較易轉移&lt;br&gt;(C) 其中 3/4 來自於 tongue base，其次為 tonsillar area 或是 soft palate&lt;br&gt;(D) 初始症狀通常為疼痛、吞嚥困難</td>
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<td>答案</td>
<td>(C) 出處：Oral and maxillofacial pathology, 2nd edition, p363，“three of every four oropharyngeal carcinomas arise from the tonsillar area or soft palate; most of the others originate on the base of the tongue”</td>
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<td>2</td>
<td>開於 x-irradiation 與 oral cancer，以下敘述何者錯誤？&lt;br&gt;(A) Decreases immune reactivity&lt;br&gt;(B) Produce abnormalities in chromosomal reactivity&lt;br&gt;(C) 頭頸部的 radiotherapy 會增加 new primary oral malignancy 的發生率，但並非 dose dependent&lt;br&gt;(D) 牙科診斷用 X 光與 oral mucosal carcinoma 目前並無直接關聯</td>
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<td>答案</td>
<td>(C) 出處：Oral and maxillofacial pathology, 2nd edition, p358，“…radiotherapy to the head and neck area increases the risk of the later development of a new primary oral malignancy,…This effect is dose dependent,…”</td>
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