

Jimmy Yu-Wai CHAN

Clinical Associate Professor, Department of Surgery
The University of Hong Kong

Surgical Management of Post Radiation Induced Malignancies

Since the initial description in 1922, numerous small series have reported bone and soft-tissue sarcomas after exposure to various forms of radiation. The cumulative incidence of post-radiation malignancy is reported to be 0.03% to 0.8%. The rarity of the condition has rendered systematic study difficult. The term post-radiation malignancy is used in preference to radiation-induced malignancy because, despite over-whelming evidence, an absolute causal relationship is difficult to establish. The diagnostic criteria were proposed by Cahan et al. in 1948, followed by some modifications over the years.

From our head and neck cancer database, among all the patients with post-radiation malignancy, all but one patient had previous radiotherapy for nasopharyngeal carcinoma. The high dose of radiation given, the increasing popularity of concurrent chemoradiation, and the long survival certainly render patients with nasopharyngeal carcinoma, especially those who presents with early stage disease, a significantly higher chance of developing post-radiation malignancy in the future.

The latency period between radiation and the development of second tumour is also controversial and highly variable. The mean latency period in our series was 12.4 years, with the longest being nearly 20 years after the initial radiotherapy. Diagnosis is not always straight-forward. Long- term follow-up of patients after radiotherapy is crucial, and any suspicious lesion that progresses rapidly warrants an early histologic diagnosis.

Surgical resection with clear margins is challenging, especially for post-radiation sarcoma. Involved margins significantly increase the risk of early tumour recurrence. Although surgery may not offer an excellent survival benefit for those with positive resection margins, it is effective for palliation of symptoms, such as pain and bleeding. Post-radiation malignancy is aggressive with poor prognosis. Resection with clear margins offers the best chance of survival. Surgery is also effective in palliating symptoms to improve the quality of life in terminal cases.

陈汝威

香港大学外科临床副教授

放疗后继发恶性肿瘤的手术治疗

自1922年首次报道以来，许多小型系列报道了暴露于各种形式的放疗后的骨和软组织肉瘤。据报道，放疗后恶性肿瘤的累积发生率为0.03%至0.8%。这种情况的罕见性使得系统研究变得困难。放疗后恶性肿瘤这一术语被优先用于放疗诱发的恶性肿瘤，因为尽管有大量的证据，但绝对的因果关系是难以确定的。诊断标准是由Cahan等人在1948年提出的，随后多年来进行了一些修改。

根据我们的头颈癌数据库，在所有患有放射后恶性肿瘤的患者中，除一名患者外，所有患者都曾接受过鼻咽癌放射治疗。高剂量的放射、同步放化疗的日益普及以及长的生存期无疑使鼻咽癌患者，尤其是早期疾病患者，在未来发生放射后恶性肿瘤的机会显著增加。

放射与第二肿瘤发展之间的潜伏期也存在争议且变化很大。在我们的研究中，平均潜伏期为12.4年，最长的是初次放疗后近20年。诊断并不总是直截了当的。放疗后对患者进行长期随访至关重要，任何快速进展的可疑病变都需要早期组织学诊断。

切缘干净的手术切除具有挑战性，特别是对于放疗后肉瘤。边缘受累会显著增加早期肿瘤复发的风险。尽管手术对切缘呈阳性的患者来说可能不会带来很好的生存率，但对缓解症状，如疼痛和出血是有效的。

放疗后的恶性肿瘤具有侵袭性，预后不佳。切除时切缘干净，提供了最佳的生存机会。手术在缓解症状方面也很有效，可以改善晚期病例的生活质量。