

Surgical complications in HNSCC patients on anti-PD1 therapy



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INTRODUCTION

Use of immune checkpoint inhibitor (ICI) therapy is increasing in patients in the neoadjuvant and adjuvant setting in advanced HNSCC patients.

With the growing number of indications and patients on trials being treated with immunotherapy, the perioperative safety and risk of serious adverse events from surgery has not been fully addressed.

OBJECTIVE

To evaluate the prevalence and quality of surgical complications following treatment with anti-PD-1 therapy for head and neck squamous cell carcinoma (HNSCC)

METHODS

- Retrospective medical chart review (UW IRB approved) of patients with SCC who immunotherapy between 2013 to 2018
- Patients who underwent surgery >6 months post ICI therapy were excluded

RESULTS

- Seven patients underwent surgery within 6 months of receiving anti-PD-1 therapy (**Table 1**)
- Median age was 56 years (range 52 – 70 years) (**Table 1**)
- 5 (71%) patients were male and 2 (29%) patients were female (**Table 1**)
- Two patients underwent surgery without complications. Complications emerged in 80% of which 50% were rated as Clavien I, 25% as Clavien II – III (**Table 1**)
- At a median follow-up of 26 months, 3 patients died, 1 demonstrated a complete response (CR), 1 patients had stable disease (SD), 2 patients had partial response (PR), and 3 patients had progression of disease (PD) by RECIST criteria

Table 1. Patient and procedure details										
Case No.	Age	Gender	ECOG PS - before ICI	ECOG PS - after ICI	Procedure	ICI	Last dose of ICI before surgery, days	Estimated blood loss, ML	Length of Stay, days	Clavien-Dindo Complications
1	54	F	1	2	Thyroplasty	pembrolizum ab	58	100	1	None
2	63	M	0	1	Craniotomy	pembrolizum ab	25	200	2	None
3	56	F	0	1	Neck dissection, right pectoralis flap, left thigh split thickness skin graft	pembrolizum ab	39	100	5	Grade 1 - wound healing
4	70	M	0	0	Composite section of mandible, osteocutaneous free flap	pembrolizum ab	179	350	14	Grade 1 - intraoral edema
5	52	M	1	1	Corpectomy, laminectomy, bilateral medial facetectomies, resection of epidural tumor	pembrolizum ab	28	500	15	Grade 1 - chronic pain
6	67	M	1	1	Bifrontal craniotomy, debridement of bone flap, skin flap graft	pembrolizum ab	30	100	8	Grade 2 - breakdown of wound flap, Grade 3 - correction of CSF leak
7	53	M	2	2	Total thyroidectomy, total glossectomy, laryngectomy, thigh flap	pembrolizum ab	48	100	9	Grade 2 - wound infection

CONCLUSIONS

- A high incidence of minor surgical complications were observed in patients treated with surgery within 6 months of receiving anti-PD1 therapy for HNSCC.
- Use of ICI therapy should be considered on a case by case basis in post-surgical patients with the aid of a multi-disciplinary tumor board discussion
- Further wound care consideration may be necessary in patients that have been treated with ICI prior to major head and neck surgery

NEXT STEPS

- Assess potential risk factors associated with prolonged hospitalizations and wound complications
- Continue data collection on long-term complications of ICI therapy in post-surgical setting
- Increase sample size with sub-population analysis for patients undergoing microvascular free flap reconstruction

REFERENCES

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