Approach to a Patient with Cutaneous Malignancy in the Time of COVID-19 Pandemic

Suvashis Dash, Shivangi Saha, Somesh Gupta[1], Maneesh Singhal

Department of Plastic Reconstructive and Burns Surgery, [1]Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India

Abstract

The world is facing an unprecedented crisis of COVID-19 pandemic. This disease has weakened the economy, paralyzed the healthcare system, and worn out the human resources. Patients with cutaneous malignancy or skin cancer comprise a substantial part of the patient population and they need appropriate management of the cancer as they face the risk of COVID-19. In the wake of COVID-19 pandemic, the approach to management of cutaneous malignancy needs to be reassessed. The challenges in the management of skin cancer during COVID-19 are discussed in this article. Risk stratification considering the type and nature of malignancy, age, comorbidity, and treatment option is crucial in making the suggestions. Patient care, adequate infection control, safety of healthcare worker, and rational use of resources are the cruxes of management in this trying time.

Keywords: Basal cell carcinoma, cancer reconstruction, COVID-19, cutaneous malignancy, melanoma, skin cancer, squamous cell carcinoma

Introduction

The world is going through the devastating and unparalleled pandemic of COVID-19.[1] The disease is caused by an enveloped, single-strand RNA virus called corona virus. At the present day (April 13, 2020), data show that more than 18 million people have been infected and more than 114,000 have died of this disease.[2]

People with skin cancers are of special concern during this pandemic. According to WHO, the burden of cutaneous cancers is gradually increasing. In past decades, the incidence of nonmelanoma and melanoma skin cancers has increased significantly. Worldwide the yearly incidence of nonmelanoma skin cancers is approximately 3 million and that of melanoma is 132,000.[3,4]

Healthcare challenges during COVID

The impact of COVID-19 is so devastating on the healthcare systems; even countries with world's best healthcare infrastructures are struggling. The system is overburdened, resources are exhausted, and manpower is burnt out.

Challenges in skin cancer management

As such management of skin cancers is a challenge due to the following factors[5,6]:

- Late detection of the precursor lesions of cutaneous cancers.
- Late presentation of patients of skin malignancy leads to late detection of the disease.
- Lack of standardized imaging modalities for skin cancers.
- Multiple treatment options to choose from.
- The need for reconstructive surgery for the areas of aesthetic concern.
- Need for chemotherapy and radiotherapy for treatment.
- Need for regular follow up.

These challenges further add up in the light of COVID-19 because

Address for correspondence: Prof. Maneesh Singhal,
Department of Plastic Reconstructive and Burns Surgery,
Room No. 223, Jai Prakash Narayan Apex Trauma Centre,
All India Institute of Medical Sciences, New Delhi 110029, India.
E-mail: drmaneesh@gmail.com

Access this article online

Quick Response Code:

Website: www.jcasonline.com

DOI: 10.4103/JCAS.JCAS_65_20

How to cite this article: Dash S, Saha S, Gupta S, Singhal M. Approach to a patient with cutaneous malignancy in the time of COVID-19 pandemic. J Cutan Aesthet Surg 2020;13:349-52.

- Skin cancers are more prevalent in elderly age group patients, who are also high-risk group for COVID-19.[7] Skin cancer patients may have co-existing immune concerns.
- They may need multiple visits and follow-up which will increase the chance of infection and cross-infection.
- Patients needing surgical procedure and reconstruction procedure have more risk of infection and cross-infection.
- The patients undergoing laser therapy, plume evacuation deserve a special concern.[8]
- Some patients may need systemic chemotherapy, immune modulators, and radiotherapy, which may further decrease their immunity and increase the risk of severe infection.[9]
- Avoiding treatment for these patients may lead to progression and incurable systemic disease.
- Patients needing reconstruction for post cancer ablation need to be operated in a timely manner to prevent additional functional morbidity.

Some recommendations suggested are given in Table 1.[10,11]

Patient who are undergoing systemic treatment

Many hospitals screen the patients on the basis of history and then proceed.

Radiotherapy

For SCC and BCC postponement of RT, clinical observation is recommended. For melanoma, it is advised to continue the treatment if intent is curative. Palliative therapy can be postponed.[12]

Chemotherapy

If treatment is already started, continuation of treatment is advised, while palliative chemotherapy may be deferred. Individualized decision may be taken for each patient.[13]

Immunomodulators

On the basis of clinical factors, response, tumor biology and patient condition, the immunomodulators should be used. There are insufficient data to derive a conclusive evidence. However, TNF-alpha inhibitors have increased risk than others.[14]

Considerations

Patients

Patients with suggestive symptoms, travel history, and contacts should be screened for COVID-19. Some centers also suggest blanket screening of all the patients admitted for non-COVID-19 conditions. A strict policy regarding patient visitors should be enforced. Patients with comorbidities and elderly should be kept in isolated facilities.[15]

Healthcare workers

All healthcare personnel should be trained and informed about the disease transmission, donning, doffing, and knowledge about screening as soon as possible. Video

Table 1: Suggested recommendation for management of cutaneous cancers

Type of cancer	Age group	Recommendation	
Very low risk	Any age	Treatment can be postponed for 3 months, telemedicine consultations and follow-up can be done if there is a change in clinical appearance	
Precursor lesion,actinic keratosis, leukoplakia, cutaneous horns			
Low risk	Any age	Treatment can be postponed for 4 weeks, telemedicine consultations and follow-up can be done if there is a change in clinical appearance.	
Low-grade basal cell carcinoma. Bowen's disease. Marjolijn ulcers			
Moderate risk	Any age	**Comorbidities absent**	**Comorbidities present**
High-grade BCC, SQCC. Low-grade DFSP sebaceous carcinoma		Proceed to surgery within days, strict infection control protocol	Surgery within days can be done with strict infection control protocol; isolated mobile surgical area
High risk	<49	**Comorbidities absent**	**Comorbidities present**
Melanoma Merkel cell carcinoma. Recurrent SQCC. High-grade DFSP		Surgery within days with strict infection control protocol	Surgery and management should be started with strict infection control protocol and isolation mobile surgical area
	50–69	**Comorbidities absent**	
		Surgery within days with strict infection control protocol	
	>70	**Comorbidities absent**	**Comorbidities present**
		Decision based on clinical condition of the patient, mobile surgical area	Decision based on clinical condition of the patient, mobile surgical area. Palliative care when poor general condition

BCC = basal cell carcinoma; DFSP = dermatofibrosarcoma protuberans; SQCC = squamous cell carcinoma.

tutorials can be arranged for these methods instead of physical gatherings.[16] It is of utmost importance to protect healthcare workers in the face of limited resources. It is recommended to protect the skin and mucosa which come in contact with patient's infected body fluids. As the respiratory droplets are crucial for COVID-19 transmission, N-95 masks should be used along with face shields (National Institute for Occupational Safety and Health standard).[17]

Equipment and logistics

Shortage of medical resources and manpower is unavoidable, a rational use is mandatory, and a dedicated equipment and operation facility should be reserved for COVID patients to prevent cross-infection.[7]

Hospital and environment

Cleaning and disinfection of potential areas of high contamination should be done by 1% hypochlorite solution. Planning of routes of patient transport, changes in systems of air circulation, and avoidance of crowding are other important factors for infection control.[18]

Management of cutaneous cancers

Skin cancers usually do not present as emergency condition. However, owing to the nature of aggressive malignancy, sometimes early surgical management is needed with curative intent. In continuation, patients with facial malignancy also need to be operated to prevent possible suboptimal aesthetic and functional outcome. Surgical excision and repair provide superior aesthetic outcome as compared to ablative and topical treatments.[19] However, during COVID-19 pandemic, when many surgical procedures have been put on hold, topical immunomodulators may be considered where indicated. Nevertheless, each clinical scenario should be weighed on pros and cons by the clinician before the treatment commencement.

Use of technology

The use of telemedicine and video call facilities for consultations of the patients, or multispecialty decision making, e.g. tumor board, can be considered.[20,21] Artificial intelligence-driven mobile applications can be used for follow-up and counseling.[22]

Conclusion

The whole world is going through a difficult period with stagnancy in most of the aspects of life. Care of skin malignancy during this period deserves due consideration with application of clinical logic. Optimal patient care along with safety of the healthcare workers is an absolute priority (the safety of health care workers is crucial along with providing optimal patient care). Designing and planning the healthcare system with judicious use of resources is important in adequate management of skin malignancies.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. World Health Organization. Events as they happen. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen. Accessed April 13, 2020.
2. Worldometer. Covid-19 coronavirus pandemic. https://www.worldometers.info/coronavirus/. Accessed April 13, 2020.
3. World Health Organization. Skin cancers. How common is skin cancer? https://www.who.int/uv/faq/skincancer/en/index1.html. Accessed April 13, 2020.
4. Centres for Disease Control and Prevention. Skin cancer: Basic information. What is skin cancer? https://www.cdc.gov/cancer/skin/basic_info/what-is-skin-cancer.htm. Accessed April 13, 2020.
5. Stratigos A, Garbe C, Lebbe C, Malvehy J, del Marmol V, Pehamberger H, *et al*. Diagnosis and treatment of invasive squamous cell carcinoma of the skin: European consensus-based interdisciplinary guideline. Eur J Cancer 2015;51:1989-2007.
6. Pavri SN, Clune J, Ariyan S, Narayan D. Malignant melanoma: Beyond the basics. Plast Reconstr Surg 2016;138:330e-40e.
7. Day AT, Sher DJ, Lee RC, Truelson JM, Myers LL, Sumer BD, *et al*. Head and neck oncology during the COVID-19 pandemic: Reconsidering traditional treatment paradigms in light of new surgical and other multilevel risks. Oral Oncol 2020;105:104684.
8. Emadi SN, Abtahi-Naeini B. Coronavirus Disease 2019 (CoVID-19) and dermatologists: Potential biological hazards of laser surgery in epidemic area. Ecotoxicol Environ Safety 2020;198:110598.
9. Kang DH, Weaver MT, Park NJ, Smith B, McArdle T, Carpenter J. Significant impairment in immune recovery after cancer treatment. Nurs Res 2009;58:105-14.
10. Kutikov A, Weinberg DS, Edelman MJ, Horwitz EM, Uzzo RG, Fisher RI. A war on two fronts: Cancer care in the time of COVID-19. Ann Intern Med 2020;172:756-8.
11. Burki TK. Cancer guidelines during the CoVID-19 pandemic. Lancet Oncol 2020;21:629-30.
12. Simcock R, Thomas TV, Estes C, Filippi AR, Katz MA, Pereira IJ, *et al*. COVID-19: Global radiation oncology's targeted response for pandemic preparedness. Clin Transl Radiat Oncol 2020;22:55-68.
13. NHS guidance. https://www.england.nhs.uk/ coronavirus/wp-content/uploads/sites/52/2020/03/ specialty-guide-acutetreatment-cancer-23-march-2020.pdf. Accessed April 13, 2020.
14. Price KN, Frew JW, Hsiao JL, Shi VY. COVID-19 and immunomodulator/immunosuppressant use in dermatology. J Am Acad Dermatol 2020;82:e173-5. doi: 10.1016/j.jaad.2020.03.046
15. Jazieh AR, Al Hadab A, Al Olayan A, AlHejazi A, Al Safi F, Al Qarni A, *et al*. Managing oncology services during a major coronavirus outbreak: Lessons from the Saudi Arabia experience. JCO Glob Oncol 2020;6:518-24.
16. Centres for Disease Control and Prevention. Guidance for donning and doffing personal protective equipment (PPE) during management of patients with ebola virus disease in U.S. hospitals. https://www.cdc.gov/vhf/ebola/hcp/ppe-training/index.html. Accessed on April 13, 2020.
17. Greig PR, Carvalho C, El-Boghdadly K, Ramessur S. Safety testing improvised CoVID-19 personal protective equipment based on a modified full-face snorkel mask [published online ahead of print April 10, 2020]. Anaesthesia 2020. doi:10.1111/anae.15085
18. Hong YR, Lawrence J, Williams D Jr, Mainous III A. Population-level interest and telehealth capacity of US hospitals in response to COVID-19: Cross-sectional analysis of Google search and national hospital survey data. JMIR Public Health Surveill 2020;6:e18961.

19. Mahajan S, Kalaivani M, Sethuraman G, Khaitan BK, Verma KK, Gupta S. A retrospective study of outcome with surgical excision and repair versus nonsurgical and ablative treatments for basal cell carcinoma. Indian J Dermatol Venereol Leprol 2020;86 (in press).
20. Portnoy J, Waller M, Elliott T. Telemedicine in the era of COVID-19. J Allergy Clin Immunol Pract 2020;8:1489-91.
21. Marka A, Carter JB, Toto E, Hassanpour S. Automated detection of nonmelanoma skin cancer using digital images: A systematic review. BMC Med Imaging 2019;19:21.
22. Rat C, Hild S, Rault Sérandour J, Gaultier A, Quereux G, Dreno B, *et al*. Use of smartphones for early detection of melanoma: Systematic review. J Med Internet Res 2018;20:e135.