

FREQUENCY OF SKIN MANIFESTATIONS IN PATIENTS ON CHEMOTHERAPY

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Abstract: *The study's objective was to determine the frequency of skin manifestations in patients on chemotherapy. This cross-sectional study was conducted on 170 patients on chemotherapy with post-acne scarring and hyperpigmentation not responsive to other treatments were included at the Department of Dermatology, Unit-I, Jinnah Hospital Lahore from April 2016 to September 2016. Patients of both genders and any age and on chemotherapy, at least after their first dosage, were included. Patients having skin manifestation before chemotherapy, patients with a history of HCV, those having diabetes mellitus (Fasting BSR > 100 mg/dl), and patients having other connective tissue diseases, SLE, DLE, etc., were excluded. A dermatologic examination was performed, and biopsy, mycological and bacteriological tests were conducted if necessary. Skin manifestations were labelled. A total of 170 chemotherapy patients participated in this trial. There were 58 (34.1 percent) females and 112 (65.9%) males. Fifty-three people (31.2%) had no skin manifestations, 61 people (34.9%) had one, 40 people (23.5%) had two, and 16 people (9.4%) had three skin manifestations. A total of 75 patients (44.1%) are under the age of 30, 40 patients (23.5%) are between the ages of 31 and 45, and 55 patients (32.4%) are over the age of 45. In 2 cases, acral erythema was seen (1.2 percent). In 21 cases, dry skin was seen (12.4 percent). There was alopecia in 93 individuals (54.7 percent). Sixteen patients still had the eruption (9.4 percent). Three of the patients had acne (1.8 percent). In 7 cases, purpura was present (4.1 percent). In 47 cases, mucositis was found (27.6 percent). Age and gender had no impact on the number of cutaneous manifestations. People receiving chemotherapy frequently get cutaneous symptoms. Alopecia, mucositis, and xerosis were among the most typical cutaneous signs.*

Keywords: Xerosis, Papulo-pustular Eruptions, Chemotherapy, Alopecia, Mucositis

Introduction

Cancer is becoming a significant health threat in several Asian countries and West Pakistan, and it's become the leading reason of death. In past years there have been over three million new cancer cases and over two million cancer deaths in Asia, and projections recommend that the number of recent cancer cases in Asia can increase to seven.1 million by 2020 (Hanif et al., 2009). Numerous cutting-edge therapeutic agents have been used to treat cancer over the past 20 years. This medication could alternatively be categorized in accordance with its mode of action: Antimetabolites (Purine analogues and Pyrimidine analogues), Proteasome inhibitors, Spindle inhibitors (Taxanes and genus Vinca alkaloids), Genotoxic drugs, and Signal transduction inhibitors (Epidermal protein receptor - EGFR-antagonists and Multikinase inhibitors) (Fabbrocini et al., 2012; Noushin et al., 2008). Skin tissues have a rapid rate of cellular division, making them susceptible to adverse reactions (harmful or readily

affected) brought on by systemic chemotherapeutic treatment.(Criado et al., 2010). Antineoplastic agents are substances that restrain or anticipate the expansion of neoplasms. Due to their high metabolic rate, the skin is one of the foremost imperative target organs of the poisonous quality related to chemotherapy. A few drugs can trigger localized responses due to extravasation to tissues adjoining the application zones (Heidary et al., 2008). Chemotherapy mucocutaneous responses are common and now and then not analyzed (Frieling, 2015).

Clinical trials have shown varying rates of mucosa and cutis xerosis, ranging from mild to severe forms with dermatitis and crevices, from 12 percent to 35 percent. (Lacouture, 2009). A growing skin poisonous quality, which results in overall skin dryness (in more than 90% of patients) and a follicular rash, which can be complicated by pruritus, torment, and contamination, has been

identified as one of the innovative therapeutic methods in chemotherapy recommended for treating lung and colon-rectal tumours. (Galimont-Collen et al., 2007; Li and Perez-Soler, 2009). Another study by Fabbrocini G found that 100% of chemotherapy patients may get cutaneous manifestations (Fabbrocini et al., 2012). The current study aimed to determine the frequency of skin manifestations in patients on chemotherapy.

Methodology

This cross-sectional study was conducted on 170 patients on chemotherapy with post-acne scarring and hyperpigmentation not responsive to other treatments were included at the Department of Dermatology, Unit-1, Jinnah Hospital Lahore from April 2016 to September 2016. Patients of both genders and any age and on chemotherapy, at least after their first dosage, were included. Patients having skin manifestation before chemotherapy, patients with a history of HCV, those having diabetes mellitus (Fasting BSR > 100 mg/dl), and patients having other connective tissue diseases, SLE, DLE, etc., were excluded. A skin dermatologic checkup was done, a biopsy, and mycological and skin manifestations were labelled.

Results

There were 58 (34.1%) women and 112 (65.9%) men. Fifty-three people (31.2%) did not have any skin symptoms, 61 people (35.9%) had one manifestation, 40 people (23.5%) had two manifestations, and 16 people (9.4%) had three manifestations. A total of 75 (44.1%) patients are under the age of 30, 40 (23.5%) patients are between the ages of 31 and 45, and 55 (32.4%) patients are over the age of 45. In 2 cases, acral erythema was seen (1.2 percent). In 21 cases, dry skin was seen (12.4 percent). There was alopecia in 93 individuals (54.7 percent). Sixteen patients still had the eruption (9.4 percent). Three of the patients had acne (1.8 percent). In 7 cases, purpura was present (4.1 percent). In 47 cases, mucositis was found (27.6 percent). Age and gender had no impact on the quantity of cutaneous manifestations.

Table 1: Distribution of patients by having skin manifestation (n=170)

Skin manifestation	No.	Percentage
Absent	53	31.2
One present	61	35.9
Two present	40	23.5
Three present	16	9.4

Table 2: Distribution of patients by frequency of skin manifestation (n=170)

Skin manifestation	No.	Percentage
Acral erythma	2	1.2
Dry skin	21	12.4
Alopecia	93	54.7
Eruption	16	9.4
Acne	3	1.8
Purpura	7	4.1
Mucositis	47	27.6

Discussion

Systemic and neighborhood cancer medications can cause several changes within the skin, mucous films, hair, and nails. When dermatologic injuries emerge in patients being treated for cancer, they may speak to a side impact of therapy, but other etiologies should be considered. These incorporate a cutaneous response to other drugs, worsening of an existing condition, contamination, metastatic tumour inclusion, a paraneoplastic marvel, graft-versus-host illness, or a dietary disorder (Noushin et al., 2008).

Precise determination and administration of chemotherapy-related side impacts require the clinician to learn the foremost commonly detailed cutaneous response designs for the drugs the quiet accepts. The clinician must moreover be commonplace with the cutaneous signs of certain cancers and the dermatologic impacts of other cancer medications. In a few cases, symptomatic vulnerability can, as it was, be clarified with a rechallenge, and the clinician must decide whether the rechallenge is restoratively justifiable (Lacouture, 2009).

In our study, 31.2% had no skin manifestations, while 35.9% had one, 23.5% had two, and 9.4% had three skin manifestations. It implies that two third patients on chemotherapy suffer one or other type of skin manifestations. These cutaneous results affect the quality of life. Prompt diagnosis of such manifestations and subsequent treatment may improve cancer patients' quality of life. In our study, alopecia was the most common skin manifestation in 54.7% of patients. It was followed by mucositis in 27.6% of patients, Dry skin in 12.4% of patients. Papulopustular eruption in 9.4% of patients. Acral Erythema was found in 1.2% of patients. Acne was present in 1.8% of patients. Purpura was present in 4.1% of patients. Compared to Giovannini et al. (2009), rashes were found in 60% of patients, dry

skin in 35% of patients, and mucositis in 36% of patients, which is comparable with our study.

Conclusion

It is concluded that the frequency of skin manifestations is relatively high in patients on chemotherapy. The most common skin manifestation was alopecia followed by the mucositis and xerosis.

Conflict of interest

The authors declared absence of conflict of interest.

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