Abstract: Xeroderma pigmentosum (XP) is a rare autosomal recessive disorder, characterized by a genetic defect in DNA repair. The consequence is a high incidence of skin cancers on sun-exposed cutaneous surfaces of affected children. Patients with xeroderma pigmentosum who are younger than 20 years of age have a 1000-fold increased risk of developing skin cancer. Early detection of these malignancies is necessary because they are fast growing, metastasize early and lead to death. Early detection and treatment of these will reduce the morbidity and mortality. It is important to be aware of multiple malignancies of different types occur in the same patient with XP, commonly Basal cell carcinoma, Squamous cell carcinoma, Malignant Melanoma. Basosquamous carcinoma (BSC), a variant of BCC is a rare cutaneous tumor that has not been elaborately described in the dermatologic literature. It has been depicted as an aggressive tumor with a high incidence of distant metastasis. The diagnosis of basosquamous cell carcinoma is controversial. Basal cell carcinomas with areas of squamous cell carcinoma may be called Basosquamous Carcinoma. BSCs having tissue invasion similar to that of BCC or SCC but had a higher frequency of pulmonary metastasis than SCC. We present a case in which a longstanding lesion initially diagnosed as basal cell carcinoma by wedge biopsy was later found to have basosquamous histology.

Keyword: Xeroderma pigmentosum, basosquamous carcinoma, basal cell carcinoma.

Introduction
Xeroderma Pigmentosum is an autosomal recessive genetic disorder of DNA repair in which the ability to repair the damage caused by ultraviolet light is defective. It is a rare disorder, with incidence of 1:250000 in Europe and the United States, more common in Japan (1:40000) and very rare in India. Basosquamous carcinoma (BSC) is a rare epithelial neoplasm with features of both basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) and is linked by a transition area. Like SCC, BSC is more locally invasive, aggressive, and more likely to metastasize than other forms of BCC.

Incidence of BSC among the BCC is 3%, 8% and even 12%. Metastasized BSC is more difficult to treat and has a poor prognosis. Clinically, most BSCs are located in the head and neck, mainly on the nose and in the auricular and periauricular regions. BSC is usually a slow-growing tumor and the low rate of correct diagnosis of BSC is probably due to small biopsy specimens. Moreover, BSC has nonspecific clinical presentation and diagnosis is made only after biopsy. Excision is probably the best treatment, and surgical margins should be wider than those for low-risk BCC due to the infiltrative growth pattern of this tumor. Nevertheless, high recurrence rates are reported despite wide local incision, making complete excision essential.

Case Report:
A 30 year old lady, a known case of Xeroderma pigmentosum admitted with complaints of ulcer over the right side of the forehead for two months and ulcer over nose for one month. Both appeared spontaneously and gradually increased in size, with serous discharge. The patient had mild itching and slight pain over the ulcer. The patient had diminished vision for distant objects for about two months. No other constitutional symptoms like fever, cough, headache, vomiting and giddiness. She did not have loss of appetite, loss of weight. Bladder and bowel habits were normal. Patient had a history of surgery for parotid adenoma about one year back. Attained menarche at 13 yrs of age with normal menstrual cycles and attained menopause at 26 years of age. Patient is unmarried. The patient did not have the habit of using any forms of tobacco products or alcohol. The patient did not have any positive family history.

On general examination she was thin built with multiple hyper and hypopigmented patchy lesions all over the body and extremities, more on sun light exposed areas. The patient had sparse hair in scalp with thin skin. There was no anemia, jaundice or significant lymphadenopathy. Other systems examination was fond to be normal. On local examination there was an ulceroproliferative growth over the right side of the forehead with the size of 2x2 cm. The growth had irregular nodular surface, raised edges and hyperpigmentation.

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The floor of the ulcer was sloughed out and discharging foul smelling serous fluid. The ulceroproliferative growth was not freely mobile, hard in consistency and bleeds on touch. There were two ulcers of size 1x1 cm present one over the middle of the forehead and the other over the root of the nose. 0.5x 0.5 cm ulcer was found in the upper lip. Hyperpigmented, melanotic, irregular lesions were found on the right side of the face over the malar region and nasolabial fold with a size of 2x 1.5 cm and 1.5x1cm respectively.(FIG 1 and Fig 2).

All the hematological investigations, ultrasonogram of the abdomen, chest X ray and electrocardiogram findings were found to be normal. Wedge biopsy taken from the melanotic lesion from right side face and the histopathological examination showed dysplastic nevus. Histopathological examination of the wedge biopsy from the forehead lesion revealed basal cell carcinoma. Plastic surgeon’s opinion was obtained and planned for wide local excision with split skin grafting. For the forehead lesion wide local excision with split thickness skin grafting was done. For the lesion in the right side of the face wide local excision with Limberg flap was done. For the Nasal lesion wide local excision with V-Y advancement flap was done. For the lesions on the root of the nose and the lip excision and primary suturing was done.(FIG.3 and FIG.4)

Excised specimens (FIG.5) were sent for histopathological examination. Post operative period was uneventful. Histopathology Report:
1. Post operatively the histopathological examination (FIG.6,7,8 and 9) from the forehead lesion showed features of squamous cell carcinoma and basal carcinoma together. Upper medial margin of the tumor had tumor invasion, right margin of the tumor had the features of basal cell carcinoma and rest of the tumour margins found to be tumor free.
2. The histopathological examination of the nasolabial fold lesion revealed features of basal cell carcinoma.

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University Journal of Surgery and Surgical Specialties
3. The histopathological findings of the nevus lesion showed features of intradermal nevus with normal histology cut margin all around.

4. The histopathological examination of the lesion from the nose showed fibro fatty tissue with few sebaceous glands and muscle bundles.

5. The histopathological examination findings of the lesion from the lip was features of basal cell carcinoma. With post operative histopathological reports oncologist opinion was obtained, they suggested to apply 5 Flurouracil topical preparations over the operated site, to avoid sunlight exposure and advised monthly follow up. Dermatologist suggested zinc cream application for sun exposed areas. Ophthamologist opinion was obtained, they suggested Lacrygel eye ointment and artificial tear drops application. Patient was discharged and reviewed periodically. Patient symptomatically, clinically and cosmetically improved (FIG 10). Presently she is on follow up in oncology department.

Discussion:

Initial report of Xeroderma pigmentosum was made by Hebra and Kaposi in 1874; the term XP (pigmented dry skin) was introduced in 1882. XP found worldwide in all races with an equal sex incidence. XP is a genodermatosis characterised by photosensitivity, pigmentary changes in skin, premature aging of skin and development of cutaneous and internal malignancies at an early age. Patients are more sensitive to ionizing radiation. Within few years of life BCC, SCC, Melanoma will develop. Many malignant skin tumors are easily classified as either classic BCC or SCC, with the correct prediction of their biological behavior. Some tumors, however, are intermediate in their histology, while others are somewhat variable from one microscopic field to another. These groups of tumors are classified as BSCs. Existence of basal cell carcinoma with features of squamous cell carcinoma was first postulated on 1922.

The diagnosis of the present case was BSC. There was no transition zone between BCC and SCC. The BSC areas have small, uniform, hyper chromatic cells, with peripheral palisading mitoses and stromal collagen deposition with proliferative fibroblasts. In contrast to pure BCC, some basaloid cells in BSC have eosinophilic cytoplasm, often lack the characteristic peripheral palisading and retraction artifact and exhibit variable cytoplasmic keratinization. Basaloid cells are mitotically more active than indolent growth BCC, with greater numbers of apoptotic nuclei. SCC areas are characterized by large polygonal squamoid cells with eosinophilic cytoplasm reflecting cytoplasmic keratinization, larger open nuclei with prominent nucleoli, frequent mitosis, dyskeratotic cells, and intercellular bridges.

The transition zone between BCC and SCC may or may not exist and has a fibroblast-rich and collagenized stroma. However, according to Martin et al., BSC is not a collision carcinoma of BCC and SCC and the transition zone between the basal cell and squamous cell types is not necessary for the diagnosis of BSC. Clinically, BSC is most commonly seen on the head and neck, mainly involving the central face, and has a significant predominance in male Caucasians. The predilection of BSC for the head and neck region may be explained by the greater exposure to sunlight. There is a significant risk of local recurrence and metastasis with BSC, which is one, the most aggressive types of BCC, considering its infiltrative growth and stromal reaction patterns. Long-term follow-up for the detection of local recurrence and distant metastatic spread is recommended. The indicators of recurrence were positive surgical margins, lymphatic invasion, and perineural invasion, whereas the degree of differentiation and the size of the initial lesion were not significant. There is a high incidence rate of lymph node involvement and patients with perineural invasion have significantly higher rates of metastatic disease and local recurrence when compared to those without perineural invasion. Recurrence is often extremely aggressive and requires extensive resection.

Conclusions:

This case we reported because of its rarity. In our patient we had multiple basal cell carcinomas and another forehead lesion with basal cell and squamous cell carcinoma features together. These types of tumors are more aggressive and very early to metastases. They should be treated promptly and aggressively.
Basosquamous carcinoma is an aggressive epithelial neoplasm with a propensity for local recurrence and potential for distant metastatic spread. This behavior differs substantially from basal cell carcinoma. Complete resection with negative surgical margins is essential. Long term follow-up for the detection of local recurrence and distant metastatic spread is recommended.

Premalignant skin lesions may be treated with cryosurgery or topical antimitotic agents. Early removal of neoplasms should be accomplished with excision, chemosurgery or intrallesional IFN-. In selected XP patients, oral isoretinoin has been shown to significantly reduce the incidence of skin cancers

Although, early detection and treatment of cutaneous malignancies will reduce the morbidity and mortality, genetic counseling remains the most important measure for preventing xeroderma pigmentosum.

References: