

Basal cell carcinoma



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Basal Cell Carcinoma (BCC) or 'rodent ulcer' is a malignant tumor of the skin that develops from the basal cell layer of the epidermis and also from the hair follicles. It is a slow-growing tumor that usually develops in sun-affected skin. The tumor does not tend to metastasize to other parts of the body but may invade surrounding tissues (Halachmi, 2006). Basal cell carcinoma is a type of skin cancer that does not develop from the cells that produce melanin (non-melanocytic type of tumors).

It is the most common form of skin cancer and includes 75 % of all skin cancers (Halachmi, 2006). The condition frequently develops in individuals exposed to high amounts of radiation and sunlight (Halachmi, 2006). In the US, Basal cell carcinoma is the most common form of skin cancer. The incidence is higher in Australia, than in the UK and US. However, BCC does not seem to be a life-threatening condition. The incidence of Basal cell carcinoma is rising by about 10 % every year, throughout the World. The lifetime risk of developing BCC is about 30 % in Whites (Wong, 2003).

There are several types of BCC including nodular, superficial types, sclerosing type, pigmented type and the multiple-superficial type. The superficial type is usually present on the face and is seen as a growth of tissues having rolled out margins. Sometimes, the contents of the tumor may be cystic. The lesion may also appear pigmented. Frequently, nodular lesions may ulcerate or bleed when minimal trauma is applied over them. The sclerosing type usually appears as a thickened scar following surgery. BCC usually develops in the age group of 40 years and above.

Individuals who are frequently exposed to excessive sunlight or ultraviolet rays, those develop sunburns, or who have developed sunburns

during childhood, or those who have developed skin cancers (such as BCC, squamous cell carcinoma and melanoma) are at a higher risk of developing BCC (NDZL, 2007). Sometimes BCC may develop in families. In certain conditions such as Gorlin's syndrome, albinism, basal cell nevus syndrome and Borex syndrome, which runs in families, the risk of developing BCC is higher (NDZL, 2007).

Light-skinned individuals and those having blond or red-colored hair, blue or green eyes are at greater chances of developing this condition. Frequently, over-exposure to x-rays, ultraviolet and other forms of radiation may worsen the risk of developing BCC. The incidence of BCC in younger individuals is on the rise (as they may like to undergo sun tanning and spend a lot of time outdoors). Individuals who are on immunosuppressant therapy are also at a higher risk of developing BCC (Wong, 2003). BCC usually begins as a painless growth on the outer layer of relatively normal looking skin.

The tumor tends to grow and spread very slowly, and may vary in size from a two to three millimeters in the early stages to a few centimeters in the later stages. Sometimes, the lesion may ulcerate and the wound does not heal with usual amount of time. The lesion may bleed easily as the blood vessels may be involved with the tumor. The nerves may also be involved with the cancer. The affected portion of the skin may appear different. Sometimes, pigmented forms of BCC may develop such as pearly or waxy bumps or swellings (usually appears in this form), white or pink lesions, brown or flesh-colored lesions.

The lesion may also be felt as a bump or a small swelling. The regional lymph nodes are usually not involved during the early stages of the disease

and the tumor does not spread to other parts of the body, in the initial stages. Frequently, the lesion exhibits oozing or crusting on the surface. Sometimes, the lesion may develop from a scar left back following surgery. The lesion may also develop as a small depressed spot on the surface of the skin. The tumor can develop on several parts of the body such as the head, neck, scalp, ears, chest, face, nose, eyes, hands, legs, back, genitals, etc.

It is more frequent in the portions of the body exposed to sunlight. The diagnosis of BCC is made based on the history, symptoms, signs, detailed physical examination, laboratory tests (to determine the spread of cancerous cells in the blood) and biopsy. The physician will take a detailed history to determine if the individual has had a previous history of certain skin disorders and also to study the family risk patterns. A detailed examination of the lesion is performed, and the physician will study its size, shape, color, consistency, the regional lymph nodes and spread to the surrounding structures of the body (Halachmi, 2006).

The diagnosis is usually confirmed by taking a sample of the tissue for biopsy. The biopsy demonstrates the development of the tumor from the basal cell layer of the epidermis. Cancerous features are present in the sample (Halachmi, 2006). The treatment of BCC varies depending on the size of the lesion, general condition of the patient, spread to other parts of the body, part of the body involved with the cancer, involvement of neighboring tissues and lymph nodes, etc. Small superficial lesions are treated by shaving off or scraping the tumor, along with curettage and cauterization (using electric current) (NDZL, 2003).

Cauterization helps to destroy the residual cancerous cells that may be present in the surrounding tissues. A suture may be applied to ensure that the lesion heals without any problems. Larger basal cell carcinoma lesions are treated by removing the diseased tissue (excision), along with a margin of the normal tissues and suturing the skin (NDZL, 2003). A graft may be required in certain situations, to ensure the lesion heals properly. In certain types of BCC, an immune-modifying agent Imiquimod can be utilized to encourage the immune system to destroy the cancerous cells.

Photosensitizing agents such as Metvix can be utilized to treat the superficial forms of BCC (photodynamic therapy). Once this medication is applied over the lesion, the oxygen and light tend to bring about a chemical reaction that destroy the cancerous cells. This treatment may usually require for the sclerosing type of BCC. Cryotherapy (treatment using cold substances such as liquid nitrogen) is also effective in destroying the cancerous cells. Some tumors that do not spread to other parts of the body and to the lymph nodes can be treated with radiotherapy (in which high-energy waves are utilized to destroy the cancerous cells).

It may be required especially in elders who tend to develop lesions on their face. The cure rate following radiotherapy is about 90 % (Wong, 2003). Laser therapy can also be utilized to treat the tumor. Individuals with recurrent and invasive forms of the disease may require Moh's microscopically controlled excision. It is especially recommended if the borders of the tumor are ill-defined and cannot be determined. Microscopic examinations of the excised lesions are usually conducted whilst the patient is being operated. The tumor is removed until a margin of normal tissue is obtained.

Many surgeons have gone on to remove larger than usual amounts of the tissues as the unfelt extensions of the lesion are not identified (NDZL, 2003). The success rate is usually good following Moh's procedure. It can also be utilized to treat recurrences of BCC (NCI, 2007). The outcome of BCC is usually good, and depends on several factors such as size and spread of the tumor to the neighboring tissues, lymph nodes and distant parts of the body, and the promptness in detecting the cancer and initiating treatment. Very rarely, the tumor results in fatal outcome (Wong, 2003).

Usually, the chances of recurrences are less than one percent (Halachmi, 2006). Individuals undergoing Moh's procedure may have a higher recurrence rate (it is about 10 %) as the tumor may have spread to surrounding structures (due to delay in treatment) (Halachmi, 2006). Individuals who have been treated for BCC should be regularly be monitored. BCC can be prevented to some extent by lowering exposure to ultraviolet rays present in the sunlight. The skin should be protected with adequate clothing and UV-protective eyewear, especially during the midday and in summer months.

A sunscreen that protects from UV A rays and UV B rays should be utilized. The skin should be examined regularly to determine any change in color, texture or appearance. References: American Academy of Dermatology (2006). Basal Cell Carcinoma. Retrieved on April 16, 2006, from AAD Website: <http://www.aad.org/public/Publications/pamphlets/BasalCellCarcinoma.htm> Halachmi, S. (2006). Basal Cell Carcinoma. Retrieved on April 16, 2006, from Medline Plus Website: <http://www.nlm.nih.gov/medlineplus/ency/article/000824>.

htm National Cancer Institute (2006). Basal Cell Carcinoma of the Skin. Retrieved on April 16, 2006, from NCI Website: <http://www.cancer.gov/cancertopics/pdq/treatment/skin/HealthProfessional/page5> New Zealand Dermatological Society (2007). Basal Cell Carcinoma. Retrieved on April 16, 2006, from Derm Net NZ Website: <http://dermnetnz.org/lesions/basal-cell-carcinoma.html> Wong, C. S. M. , Strange, R. C. and Lear, J. T. (2003). “ Basal Cell Carcinoma. ” BMJ, 327, 794-798. <http://www.bmj.com/cgi/content/full/327/7418/794>