Isotretinoin: Current Status in the Management of Acne and Other Disorders; and Basal Cell Carcinoma: Management – What's New

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Isotretinoin: Current Status in the Management of Acne and Other Disorders

Indications for isotretinoin in acne and other conditions

When isotretinoin was first introduced, it was mainly used for the treatment of severe nodulocystic acne. With increasing experience, the indications for isotretinoin have expanded to other types of acne as well as other cutaneous disorders. Isotretinoin is effective in treating acne vulgaris as it has an effect on all four pathogenic factors of the condition. Isotretinoin reduces sebum secretion by 80%, normalises ductal keratinization, suppresses the population of *Proprionebacterium acnes*, and reduces inflammatory cell chemotaxis.

Treating acne scarring early and treating acne aggressively can help to avoid the development of psychological complications such as social withdrawal, depression, anxiety, interpersonal or employment difficulties, suicidal ideation and loss of self-confidence. Isotretinoin can reduce acne scarring and it is indicated for unresponsive (defined as acne not responding after three months of appropriate first line topical or oral therapy) or recurrent acne, cystic acne, acne with scarring and mild to moderate acne which has a potential or actual impact on occupation.

The acne variants include gram-negative folliculitis, inflammatory rosacea and rosacea fulminans. Gram-negative folliculitis is a possible complication of long term antibiotic therapy. It presents with superficial pustules without comedomes. It does not respond to usual antibiotics but can be treated with cotrimoxazole. Isotretinoin has been reported to be useful in treating conditions such as acne rosacea, rosacea fulminans and acne fulminans. Prophylactic isotretinoin therapy may be considered to preempt the development of acne for patients at high risk, for example patients who have strong family history of severe acne, and those who have adrenal hyperplasia.

Isotretinoin can also be used in the treatment of conditions other than acne vulgaris and its variants. Intractable seborrhoea can be controlled with low dose isotretinoin. For conditions like psoriasis, Darier's disease and pityriasis rubra pilaris which are traditionally treated with acitretin, isotretinoin may be an alternative, especially when conception may be a possibility later, as isotretinoin has a much shorter half-life.

Dosing regimen, monitoring and side effects

Isotretinoin is given at a daily dose of 0.5-1 mg/kg. The risk of relapse of acne is lower if the patient has received a cumulative dose of 150 mg/kg and when treatment with isotretinoin has been continued for at least two months after clinical remission. For patients with very severe inflammatory acne, it is advisable to start isotretinoin at a lower dose of 0.5 mg/kg/day.

It is important to exclude pregnancy prior to starting isotretinoin and female patients should have reliable means of contraception. Baseline blood tests like liver function test and lipids are carried out and repeated after 4-6 weeks. The risk of developing hepatitis is very small. Ocular examination is usually not necessary unless the patient complains of headache. Bone x-rays can be done for young patients who will be put on long-term treatment. Although depression and suicidal ideation had been reported in patients taking isotretinoin, it is still controversial whether isotretinoin is responsible for excessive depression and suicidal ideation in acne patients.

More commonly seen side effects of isotretinoin include dry eyes and skin, epistaxis, rectal bleeding, paronychia, chloasma and hyperlipidaemia. Cheilitis is very common and can be secondarily infected if severe. The frequent use of lip balm is encouraged. Sun avoidance is advised because of the phototoxicity of isotretinoin. Paronychia is also quite common and does not respond to antibiotics, but usually resolves when the dose of isotretinoin is reduced temporarily.

Patients who develop hypercholesterolaemia of greater than 7.0 mmol/L are usually first started on low cholesterol diet, and if there is no response, lipid lowering agents can be started. The blood glucose level in diabetic patients may be pushed up or pushed down by isotretinoin, so closer monitoring is recommended. Patients who are suffering from bone fractures should be advised to stop isotretinoin until the fractures are healed.

Learning points:
Aggressive treatment of scarring acne may prevent psychological complications. To reduce relapse of acne after isotretinoin treatment, a cumulative dose of 150 mg/kg should be given and isotretinoin should be continued for at least two months after clinical remission.

Basal Cell Carcinoma: Management – What's New

Basal cell carcinoma (BCC) is the commonest cancer in United States and Australia. The incidence of BCC is expected to rise in the next 20 years, as sunny holidays are popular among the younger generation. Although BCC in the majority of patients is not life-threatening, much damage can occur in some cases.

There are six histologic patterns of BCC: superficial, nodulocystic, papulosquamous, morphoeic, infiltrative and micronodular. Pigmented BCC can sometimes be mistaken as melanocytic naevus or seborrhoeic keratosis. BCC can be classified as high risk or low risk according to tumour size, location of tumour, pattern of growth, excision margin and histological pattern. BCCs located around the eyes, the ears, the lips, the nose and the nasolabial fold or larger than 2 cm in diameter are considered as high risk.

Standard treatment of BCC

The standard treatment modalities for BCC include surgical excision, cautery or electodessication, cryotherapy and radiotherapy. Surgical excision is by far the most popular method and clear excision margins are aimed for. Moh's microscopic surgery is usually used for treating recurrent tumours or tumours in high risk areas.

BCCs with incomplete excision margins and recurrent BCCs pose special management problems. Previous papers had suggested that even when the excision margin was incomplete, the inflammatory process could strike out any remaining cancerous cells. However, the recurrence rate is 33% if the deep margin is involved and 20% for lateral margins. Recurrent BCCs should be treated aggressively, with microscopic Moh's surgery being the treatment of choice.

Other treatment modalities for BCC

Intralesional interferon therapy has been used to treat BCC. The treatment is expensive and repeated injections have to be given with a cure rate of only about 80-85%. However, it gives good cosmetic results and can be useful for BCCs located on the face and neck, where scarring is a concern. Prophylaxis with oral retinoids can be considered for patients with Gorlin syndrome or in transplant patients who are susceptible to skin tumours.

Other newer treatment modalities for BCC include carbon dioxide laser therapy, photodynamic therapy and topical imiquimod. Carbon dioxide laser therapy is probably only useful for superficial BCCs, and there have not been many papers published concerning its efficacy. Photodynamic therapy is a new therapeutic option but long-term follow-up results are not yet available. Topical imiquimod shows promise as a non-surgical option. In a recent trial of using imiquimod to treat superficial BCCs, 5% imiquimod cream, applied once daily for 6 weeks, resulted in histological clearance in 88%.

Learning points:
Topical imiquimod shows promise as a non-surgical treatment option for BCC.