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## CHEMICAL PEELING

It has been known for a long time that superficial burning of facial skin can have a rejuvenating effect. In its current form superficial burning of facial skin using chemicals has been used for over one hundred years.

There are many different agents used for chemical peeling, from mild to severe. The best known of the mild peeling agents are so-called fruit acids, such as glycolic acid. Because of their mild action they can only disrupt the most superficial layer of the skin, the stratum corneum. The effect on the skin is very mild and short-term.

The most profound changes in the skin can be achieved by so-called phenol peels. However, the effect is not due to phenol but a substance called croton oil. This peel is only indicated for some cases of severe wrinkling where surgery cannot offer profound improvement. This type of peeling is a major procedure requiring general anaesthetic, hospitalization and recovery of at least three/four weeks. There is a significant risk of permanent scarring and loss of pigment.

For practical purposes the most popular and useful are the so-called medium type peels. The best known and used is the TCA (trichloro-acetic acid) peel. It is possible to vary the depth of its penetration from very superficial to deep and at the same time keeping it very safe with the risk of scarring being negligible. Another advantage of TCA peel is that it can be used on an out-patient basis without need for anaesthesia; oral sedation and painkillers are sufficient for most, even those of nervous disposition.

First, skin has to be prepared for peeling by removing oily substances with acetone or alcohol. This removes a barrier to the acid permeating through the skin. The operator then applies TCA in several layers until it is judged that suitable peeling depth has been reached. During each application there is a thirty second period of burning sensation. This short period of discomfort is substantially relieved by the use of air fan. At the end peeling skin looks white and assumes almost normal colour within half hour of the treatment. Skin looks off grey for the next 3-4 days.

One of the advantages of skin peeling is that burned skin remains attached to deeper skin for at least 3-4 days, acting as a dressing-barrier to infection as well as keeping discomfort to a minimum. It effectively acts as a blister. The dead skin starts coming off, or peeling, after 3-4 days. During this time it is important not to try peel off unpeeled skin. This could result in scarring. The process of peeling will last up to 12 days for the deepest peel. When the peel is over the new skin looks pink and taut and is sensitive. Gradually, it will return to looking normal, usually within six weeks.

## Chemical Peels: The Risks and Possible Complications

**As with all medical and surgical procedures, there are risks involved and these should be discussed with your Surgeon or Practice Nurse before you make up your mind about having the treatment. The following can occur infrequently after TCA peeling:**

- 1. Infection:** This complication is one of the commonest causes of scarring after chemical peeling. It can be prevented by scrupulous hygiene, especially during the peeling period, and judicious use of antibiotics and antiviral drugs (*vide infra*).
- 2. Scarring:** This complication can happen only during the healing process while skin is peeling. If the healing process is interfered with it may increase the depth of the original injury (acid burn) and the skin underneath is unable to regenerate in the usual fashion and forms a scar. There are two main causes of this complication. One cause is physical damage, such as scratching or attempted removal of peeling skin. This is preventable simply by not touching the skin during healing and not trying to pull off peeling skin.
  - a.** Second most important cause of scarring is infection; viral, bacterial or fungal. The most common is herpes or cold sore, especially in those who suffer from this condition on a regular basis. For this reason patients are given antiviral agents to tie them over the healing period. Bacterial infection is preventable by scrupulous hygiene and regular application of antibiotic cream.
- 3. Uneven pigmentation:** Those who have patchy pigmentation, such as melasma, can have a relapse of the condition after peeling. Treatment with Retinova and Hydroquinone can usually help to even out the pigment.
- 4. Permanent loss of pigment (hypopigmentation):** This problem occurs after deep peels only. It is very unusual after a standard TCA peel.
- 5. Relapse or persistence of wrinkles:** Some deep wrinkles are difficult to eradicate in one treatment. It may be impossible because it would require depth of peeling incompatible with normal skin repair. Some of these deep wrinkles may require repeat peeling or even laser touch ups.
- 6. Increased skin pigmentation (hyperpigmentation):** Increase in pigmentation usually occurs during the first few months after peeling. This is more likely to happen in darker skins and those who have had pigmented patches, such as melasma, before. The most important thing is to stay out of direct sunlight for three months after the procedure and use a strong UV protection (minimum SPF 25). The use of Retinova and Hydroquinone can also reduce this problem to a minimum.

- 7. Skin hypersensitivity:** Particularly sensitive skins can become more sensitive for a period of time after peeling. This temporary problem can be controlled by mild (0.5- 1%) hydrocortisone cream for a short period of time.
  
- 8. Redness (erythema):** This is simply an expression of skin reaction to injury. Some skins are more prone to it than others and the deeper the injury the more profound the redness. It is caused by increased blood supply through the skin. Erythema gradually settles over a period of time depending on factors such as skin sensitivity, depth of peeling, nature of the agent, etc.

**It is essential to have a consultation with a surgeon who can discuss the pros and cons of the surgery in order to decide whether to continue with the surgery or not.**