

International Conference on  
**CLINICAL & EXPERIMENTAL DERMATOLOGY**  
 &  
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**COSMETOLOGY AND TRICHOLOGY**

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### Combining Lasers and other energy Sources

**Theory of selective photothermolysis:** Theory of selective photothermolysis means Laser injury confined to target chromophore such as blood vessels, Pigmented cells, an unwanted hair without injury to adjacent structures. To make this happen Must meet following criteria Wavelength that is highly absorbed by target chromophore Fluence- Sufficient thermal energy to damage target Pulse duration - equal or shorter than thermal relaxation time Spot size- big spot size for deep and small spot size for superficial targets.

**Background:** CO<sub>2</sub> Laser resurfacing still considered Gold standard since 1994 for fine and coarse wrinkles, scars of various origin, open pores, uneven pigmentation etc. but some drawbacks like pain, recovery time, long lasting erythema, risk of Hypo or Hyper pigmentation and scarring has limited its use and we started looking for new safer and effective device. And 1540 nm laser etc. with good result To overcome these drawbacks Erbium Laser became very popular but too little result. Concept of Non ablative Fractional photothermolysis was introduced in 2003 to overcome previously mentioned side effects and improve results with Near infrared wave lengths 1550 nm Fraxel and 1540 nm laser etc. with good result and safe but significant pain and down time and needs

few treatment sessions to achieve desired result.

**Medical breakthrough:** Use of ablative CO<sub>2</sub> Laser in Fractional mode was introduced in 2006. After nearly twenty two years CO<sub>2</sub> Laser is back in Fractional mode. depth of tissue necrosis can be controlled with less pain, improved result and short recovery time and new collagen production, skin tightening and hardly any side effects. Our fractional Laser device is with new scanning algorithm that uses 180 and 300 microns beam and keeps longest possible interval between two adjacent spots in order to minimize heat accumulation around treated area This significantly reduces pain.

#### Indications:

- Post Acne Scars and other origin scars
- Open pores
- Fine and Coarse wrinkles
- Skin tightening
- Stretch marks
- Skin Dyschromias
- Dark Circles
- Photo aging

### Biography

Mahaveer Mehta is Chairman and Medical director in his own medical Center in Dubai since may 1990. Prior to this he was Chairman of the Dept. of Dermatology at Qatar armed Forces medical unit and Chairman of Dermatology at International Hospital Bahrain. He has also worked as Faculty member in Al Fateh University, Tripoli, Libya and SMS medical college, Jaipur. Dr. Mehta is internationally well known in the field of Dermatology and Lasers. He is a pioneer in introducing Lasers to the Middle East. He is successfully practicing in Dubai since 1990.

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