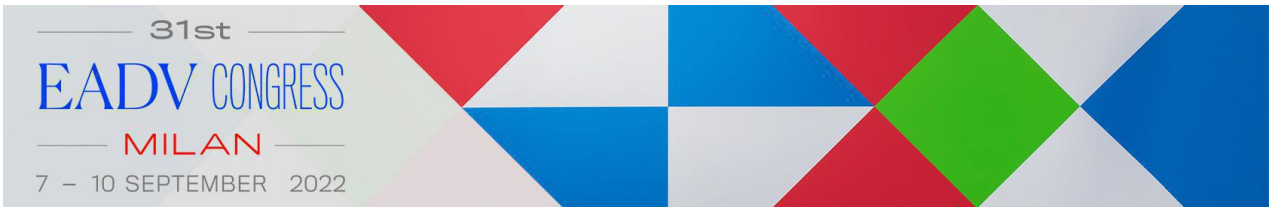

Abstract N°: 2965

Title: Treatment of benign skin tumors by High Frequency Focused Ultrasound

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Introduction Viral warts, seborrheic keratosis, sebaceous hyperplasia and hemangiomas are the most common benign skin conditions encountered in everyday dermatological practice. There are many physical and chemical methods to remove these lesions. A new, high-frequency ultrasound (HIFU) device may be useful in the treatment of benign skin neoplasms. Up until now, ultrasound-emitting devices have been used in medicine and cosmetology with a frequency of about 10MHz maximum. The TOOsonix HIFU device, which emits ultrasounds at a frequency of 20 MHz allows focusing energy on a much smaller area of the skin than those used before. More than 50 seborrhoeic keratoses, 20 sebaceous hyperplasias, 7 hemangiomas and 5 viral warts were treated, with over 60% of the total response to treatment in each of these cases. All lesions were first examined macroscopically, then with a dermatoscope, and the depth of the lesion was measured using a high-frequency ultrasound scanner (DermaScan C) to select the depth of ultrasound penetration and its energy. The therapy is minimally invasive, requiring no prior anaesthesia because the maximum pain sensations reported during the procedure did not exceed 4 on the VAS scale. During the recuperation, no major side effects were noted apart from erythema and minor scarring and hyperpigmentation. The advantages of the therapy include its high accuracy due to the entire procedure is performed under the control of a dermatoscope placed on the head of the device.

Materials and methods More than 50 seborrhoeic keratoses, 20 sebaceous hyperplasias, 7 hemangiomas and 5 viral warts were treated, with over 60% of the total response to treatment in each of these cases. All lesions were first examined macroscopically, then with a dermatoscope, and the depth of the lesion was measured using a high-frequency ultrasound scanner (DermaScan C) to select the depth of ultrasound penetration and its energy. The therapy is minimally invasive, requiring no prior anaesthesia because the maximum pain sensations reported during the procedure did not exceed 4 on the VAS scale. During the recuperation, no major side effects were noted apart from erythema and minor scarring and hyperpigmentation. The advantages of the therapy include its high accuracy due to the entire procedure is performed under the control of a dermatoscope placed on the head of the device.

Results More than 60% of the treated lesions were cleared after 3 months after therapy. The lesions were examined macroscopically and using video dermatoscope.

Discussion The device emitting high-frequency ultrasound (20MHz) can be an effective alternative to cryosurgery, electrosurgery or laser therapy in the treatment of benign skin lesions, such as seborrheic keratoses, hemangiomas and sebaceous hyperplasias.