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Kyung Hee University Medical Center building

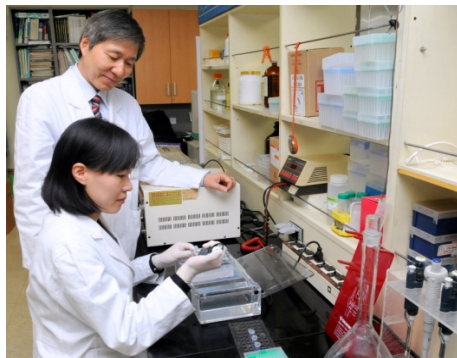


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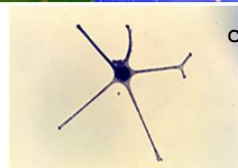
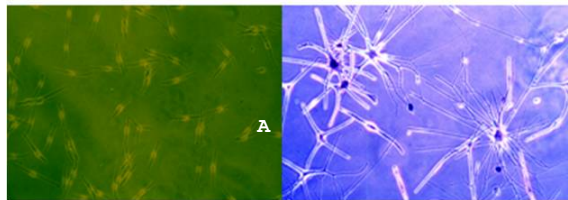
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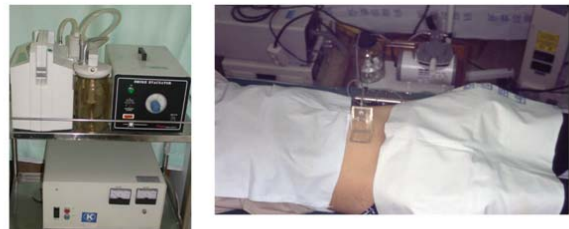
Research laboratory
(Participants:
Standing; Prof. Mu-Hyoung Lee,
Sitting; Dr. Min-Kyung Shin)



Facilities for phototherapy



Melanocyte culture (A-C)
A. melanocyte obtained from neonatal foreskin
B. melanocyte obtained from adult skin
C. hair melanocyte



Autologous epidermal graft using
suction blister



Autologous punch grafting

General description of Vitiligo program

Vitiligo patients occupy high percentage of total outpatients at the Department of Dermatology, Kyung Hee University Medical Center. This allows us to carry out various studies by collecting abundant clinical data, making a comparative analysis of individual objective treatment effects and examining subjective satisfaction of the patients (for review see ref.1). For the treatment of vitiligo, the clinic implements drug therapy, phototherapy and surgical therapy. The drug therapy includes the topical application of steroid or tacrolimus, and the intralesional injection or pulse therapy of steroid. The phototherapy is implemented over 3,000 times a year using narrow band UVB (for review see, ref.2) in most cases. In addition, good results are obtained by applying the autologous epidermal transplantation using suction blister or by applying punch minigrafting to the patients who have localized vitiligo or get the vitiligo site localized with narrow band UVB phototherapy. Treated with autologous epidermal transplantation, 76.2% of the patients showed improvement of 75% or more in vitiligo lesion (for review see ref.3).

Moreover, the clinic has the ability of culturing pure keratinocyte and melanocyte to be used for in vitro test for determining vitiligo causes. By developing the melanocyte culture medium including bFGF, ET-1 and α -MSH instead of phorbol 12-myristate 13-acetate, an important artificial mitogen in the culture medium, the clinic has the competency to treat the patients using the melanocytes grown in our own medium (for review see, ref. 4).

Review References :

1. Hong SB, Park HH, Lee MH. 2005. Short-term effects of 308-nm xenon-chloride excimer laser and narrow-band ultraviolet B in the treatment of vitiligo: a comparative study. *J Korean Med Sci* 20:273-278
2. Park JH, Kim HJ, Lee MH. 2003. Efficacy of Narrow-Band UVB Phototherapy in Vitiligo Patients. *Korean J Dermatol* 41:1022-1027
3. Kim HJ, Lee MH. 2003. Autologous Epidermal grafting in Treatment of Vitiligo: Evaluation for Its Effectiveness and Patient Satisfaction. *Korean J Dermatol* 41:287-292
4. Lee MH, Ryou JH, Jubh BJ. 1999. Comparison of the human melanocyte culture in phorbol 12-myristate 13-acetate-contained medium and physiologic mitogens-contained medium. *Korean J Dermatol* 37:168-176

Scientific description of Vitiligo program

Various studies to understand vitiligo by determining the causes of the disease are performed at the Kyung Hee University Medical Center. A few years ago, our clinic confirmed the results of Boissy et al. that there is difference in morphological and microstructural findings between melanocytes from normal appearing skin of vitiligo patient and healthy subject. (for review see ref.1). Recently, studies of gene polymorphism are intensively performed to determine the genetic background of vitiligo. Based on such studies, the clinic has reported articles demonstrating that Korean vitiligo patients are associated with angiotensin converting enzyme gene, estrogen receptor 1 gene, catalase gene, endothelin-1 gene and glutathione S-transferase gene polymorphisms (for review see ref.2.3.4.5.6).

The vitiligo clinic will make efforts to search for hereditary factors including the polymorphism of a new and significant gene to determine the relationships between vitiligo and genetic background more clearly.

Review References:

1. Cho YH, Lee MH. 1997. Microscopic findings of cultured human melanocytes from a vitiligo subject. Korean J Dermatol 35:571-574
2. Jin SY, Park HH, Li GZ, Lee HJ, Hong MS, Hong SJ, Park HK, Chung JH, Lee MH. 2004. Association of angiotensin converting enzyme gene I/D polymorphism of vitiligo in Korean population. Pigment Cell Res 17:84-86
3. Jin SY, Park HH, Li GZ, Lee HJ, Hong MS, Park HJ, Park HK, Seo JC, Yim SV, Chung JH, Lee MH. 2004. Association of estrogen receptor 1 intron 1 C/T polymorphism in Korean vitiligo patients. J Dermatol Sci 35:181-186
4. Park HH, Ha E, Uhm YK, Jin SY, Kim YJ, Chung JH, Lee MH. 2006. Association study between catalase gene polymorphisms and the susceptibility to vitiligo in Korean population. Exp Dermatol 15:377-380
5. Kim HJ, Choi CP, Uhm YK, Kim YI, Lee JW, Yoon SH, Chung JH, Lee MH. 2007. The association between endothelin-1 gene polymorphisms and susceptibility to vitiligo in a Korean population. Exp Dermatol 16:561-566
6. Uhm YK, Yoon SH, Kang IJ, Chung JH, Yim SV, Lee MH. 2007. Association of glutathione S-transferase gene polymorphisms (GSTM1 and GSTT1) of vitiligo in Korean population. Life Sci 81:223-227