

Skin diseases

The use of cell therapy was proclaimed nearly an euphoriant in early years. But enthusiasm calmed down because the indications were too wide and it was not possible to reproduce individual success in other cases. Publications of that time are by G. ACKERMANN (1956); R. ECKSTEIN (1955); H. HASSELMANN (1959); P. H. JANSON (1953–1957) and a survey by G. W. KORTING (1957). Reference is made to the following indications: *systematised elastorhexis sarkoid* DARIER-ROUSSY; *cosmetic lesions*; *Kera-*

tosis palmaris et plantaris hereditaria; *rosacea*, *Acne vulgaris*, *Lichen chronicus simplex*, *scleroderma*. The reports contradicted each other especially for the therapy of acne, and varied from prompt success to failure.

As many skin diseases are based on internal and, specially, metabolic disorders, the therapeutic scheme for the indications was probably not broad enough so that failure had necessarily to be anticipated. Since the skin is a superficial organ, it is recommended to apply the skin

Tab. 47: Indications for fetal cutaneous extract in 109 tests

Objective control and recording were possible for the skin diseases (fig. 284–292) whereas only subjective data are available for the «internal» tests.

Symptom	Cases	Effect proved	Without effect
Burns, scalds	34	34	0
keloid scars	21	17	4
epidermolysis-Lyell's syndrome	3	3	0
eczema acute, dermatitis seborrh.	3	0	3
ulcus cruris	3	2	1
«senile skin»	4	3	1
dermatitis by irradiation	1	1	0
anhidrosis syndromes	3	2	1
hyperkeratosis	8	6	2
alopecia	6	6	0
acne	4	2	2
affections of joints and ligaments	7	7	0
mucopolysaccharidosis	1	0	1
colitis	3	3	0
epicondylitis	8	8	0

preparations locally; however, it is difficult to find the proper degradation-size of the skin derivatives.

Many attempts indeed have been made to cover major cutaneous defects with transplants of skin and other organs. Used were *omentum transplants* (A. NISHIMURA, 1973), *skin of dead bodies* (B. KÖRHOF, 1973), *wraps of amnion* (M. C. ROBSON, 1973) and *epidermic suspensions* (W. D. F. MALHERBE, A. MEYER and J. VAAN DER WALT).

Relying on own experience with *large burns* and *scalds* in children, the author developed a fetal cutaneous extract suitable for prolonged local applications in various skin diseases. Two multicentric studies were conducted to determine the spectrum of indications. Later, the fetal cutaneous extract was put on the market under the reg. trade-mark *Cellcutand*®. It constitutes an ultrafiltrate, which is prepared by extraction of fetal skin, fetal connective tissue, placenta and adrenal gland.

This composition was chosen to favour the physiological connections between the epidermis and subcutaneous tissular formations and to promote the regeneration of cutaneous lesions also from beneath. The preparation is available in two pharmaceutical forms, as a lyophilisate and as a suspension, is stable if dissolved at temperatures of 2–8°C for more than a week without losing anything of its efficiency, but should be used immediately after resuspension in Ringer's, Tyrode solution or in the suspension liquid supplied along with the preparation. The local effect can be improved by warming and cleaning the skin. In cases of extensive scalds, burns and irradiation burns it is advisable to disperse the extract or the lyophilisate on thin layers of muslin soaked with Ringer's solution.

The results of the two tests are represented in the Tab. 47, 48, and it must be pointed out that a total of 47 physicians, 15 of Switzerland and 32 of the Federal

Tab. 48: Fet. skin extract: multicentric study Switzerland – Fed. Rep. of Germany.

In the Swiss group, 51 tests were positive, 5 doubtful, 7 negative. In the Fed. German group, 41 tests were positive, 2 doubtful, 4 negative. All in all, positive results were seen in 92 cases of 110, 7 were doubtful and 11 negative; the indications had been chosen in part by the treating physicians themselves.

Indications	Switzerland			F. R. Germany			Sum		
	Result			Result			Result		
	+	?	–	+	?	–	+	?	–
Acne (various stages)	3	1	1	7	1	1	10	2	2
Acrodermatitis			1						1
Alopecia areata	4		1				4		1
Alopecia totalis		1						1	
Diabetic gangrene	1						1		
Epicondylitis			1	2			2		1
Epidermolysis bull. hered.	1						1		
Eczema				1			1		
Hair dystrophy	1						1		
Cutaneous metastasis in mammal carcinoma					1			1	
Hyperkeratosis	1			2		1	3		1
Keloids	10	1		7		1	17	1	1
Mult. cutaneous ulcers in Pyoderma gangraenosum	1						1		
Ulcer on the tip of the nose				1			1		
Neurodermitis	1						1		
Pigment-variations	3						3		
Pruritus senilis			1						1
Psoriasis		1	1					1	1
X-ray skin	2						2		
Ulcus cruris	13			8			21		
Sequels of burns and scalds	10			8			18		
Vitiligo		1	1					1	1
Secondarily healing skin transplantation				1			1		
Ichthyosis				2			2		
Erythema solare				1			1		
Herpes zoster				1			1		
Reticulo-sarcoma						1			1
	51	5	7	41	2	4	92	7	11
	63			47			110		

Republic of Germany, participated in the 2nd test, which took place between January 1st, 1978, and June 30th, 1979. The following indications crystallized

for the fetal cutaneous extract: *scalds, burns* (fig. 286, 287), *irradiation burns on the skin physical injuries* (fig. 290), *explosi-on injuries* (fig. 289), *keloids, hyperkera-*



Fig. 284:
Rothmund's syndrome with downy hair at the beginning of treatment at 3 years. Development of the hair of the head within a year (e) and after 3 years (f, g).



Fig. 285:
Christ-Siemens-Tourraine's (anhidrosis) syndrome. First nearly invisible, thin downy hair. Condition after 3 years of treatment.



Fig. 286:
Scald with hot water, 2nd–3rd degree a) after 3 days; b) after 2 weeks. Nearly scarless regeneration of the skin.



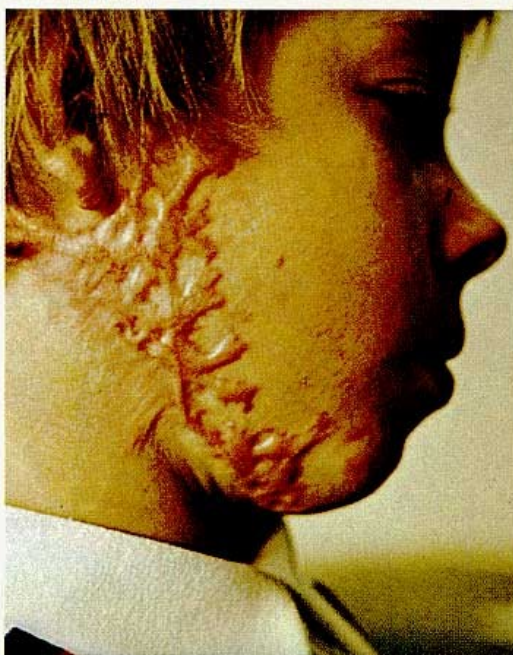
Fig. 287:
Scald with hot water, 3rd degree. Course of a week (a–c).





a

Fig. 288:
Keloid scars of a 9-year-old girl after burn by exploding spirit. Course:
a) treatment initiated with fetal skin extract;
b) after three months;
c) after nine months.



b



c

tosis (fig. 291, 292), *anhidrosis syndromes* (fig. 284, 285), *ulcus cruris* (fig. 293, 295, 296), *senile atrophy of the skin*; *trophic disturbances in circulatory trouble*; *Lyell syndrome*; *cosmetic lesions*; *keloids* (fig. 288); *sclerodermia*. Different were the results of the treatment of *acne* in

various stages, of *Alopecia areata* and of *psoriasis* (W. SCHUCK, 1982).

Contraindications for the local application of fetal cutaneous extract are acute inflammatory affections of the skin, above all the acute wet eczema, which may grow worse by applications



Fig. 289:

Burns of 2.-3. degree in face and neck by gas-explosion.

- a) condition on admission in the hospital
- b), c) cleaning and rejection of the necroses on 7th and 10th day
- d) 16th day
- e) 19th day; nearly complete healing
- f) 18 month later skin without scars

of Cellcutana, and acute viral skin-diseases, especially herpes.

The optimal treatment of innate and chronic skin-diseases, however, may be some combination of cell-therapeutic remedies supplied parenterally, and their application to the surface.

For parenteral doses of lyophilisates, especially fetal liver, placenta, connec-

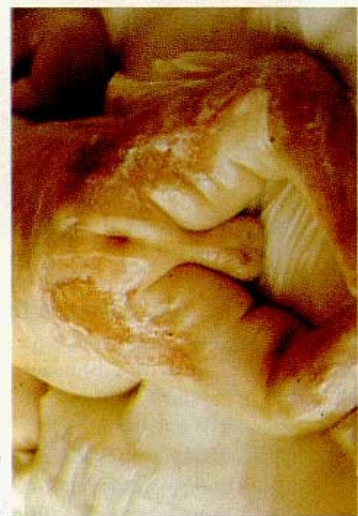


Fig. 290: Text see page 343.

Fig. 291:

Ichthyosis congenita, pictures of the lower leg (a, b) and central abdomen (c). After application of fetal cutaneous extract, the hyperkeratotic scales disappear sometimes within days (d, e).



◀ **Fig. 290:**

Third-degree burns through defective

a) gummbattle in a newborn baby; about

b) 30% of body surface are involved

c) and d) Demarkation of the «coaled» tissue-necrosis on the 10th and 13th day

e, f, g) progressing cleaning and healing after 3, 5 and 7 weeks

h) and i) relatively minor scars and recovered functions after months

tive tissue and, as far as hirsutism on the body is concerned, sex-specific adrenal preparations, besides fetal skin, should be taken into consideration. HAGMEIER (1978) presented impressive results with fetal mesenchyme – Resistocell® – even in long-lasting skin defects resistant to other remedies (fig. 293–296).

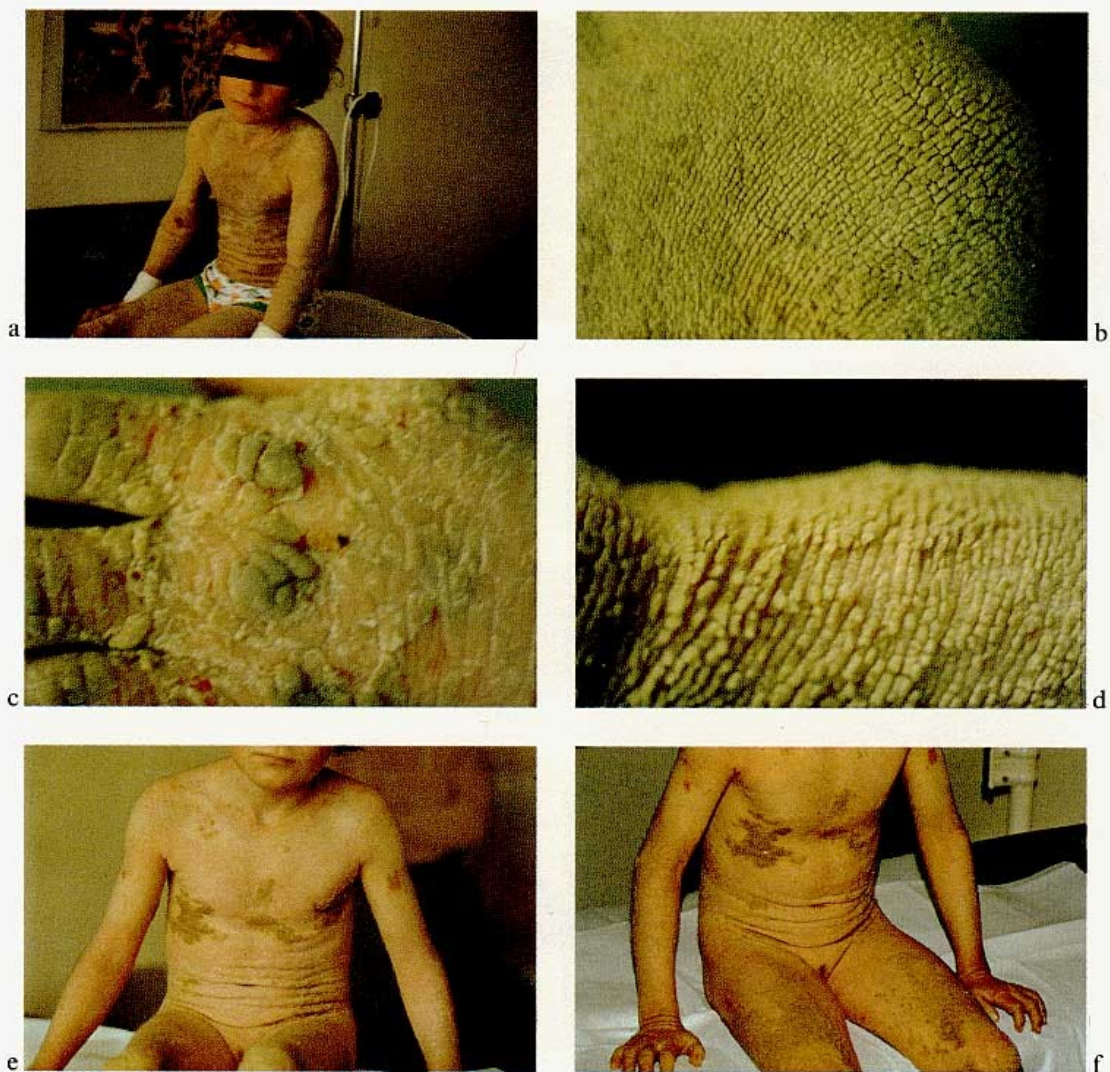


Fig. 292 a-f:
Serious Ichthyosis cong. (Hysterix) in 8-year-old girl. Practically all therapies were exhausted, fetal cutaneous extract brought improvement but no essential change. Initial situation with injection implantations of 150 mg of liver, 150 mg of placenta (781 220); after 5 weeks (790 129) extensive scaling, an effect that persisted only 6–8 weeks even after repeated implantations.



Fig. 293:

Ulcus cruris with phlegmon in diabetes

Ulcus on left leg open for more than 20 years, with phlegmon on lower leg in Diabetes mellitus.

On admittance, a smeary palm-sized ulcer, moreover ulcerations about the size of a piece of money (\varnothing 25 mm) on the inner ankle.

Cell therapy with fetal mesenchyme.

After a few days already, astonishing cleaning of the wound, the improvement of which can be followed nearly with the naked eye (HAGMEIER, 1978).



a



b



c

Fig. 294 a-c:

Secretion of wounds (HAGMEIER, 1978)

A patient with highly intense adipositas (125 kg, 162 cm), serious gall-bladder emphysema, stenosis of cysticus and cholithiasis.

After extensive operation still after 6 months highly intense wound secretion in spite of all conventional therapeutic measures. In this condition – i. e. after 6 months – implantation of 1 ampoule (= 100 mg) of Resistocell.

After 10 days already essential improvement of general condition, visibly increasing healing of the large surgical wound, proceeding with completely stopping secretion and rapid, entire epithelisation.

Fig. 295 a-c:

Burn with remaining ulcer cruris

Extensive burn on right lower leg with remaining leg ulcer above the edge of tibia, no healing for 5 months.

Then 100 mg of Resistocell®: after 8 days already complete cleaning of wound so that skin could be transplanted. Complete epithelisation. Consequently, recovery after 5 months of vain treatment with one injection of Resistocell®. Observed for more than 2 years (fig. c: 2 years after injection).



b



a



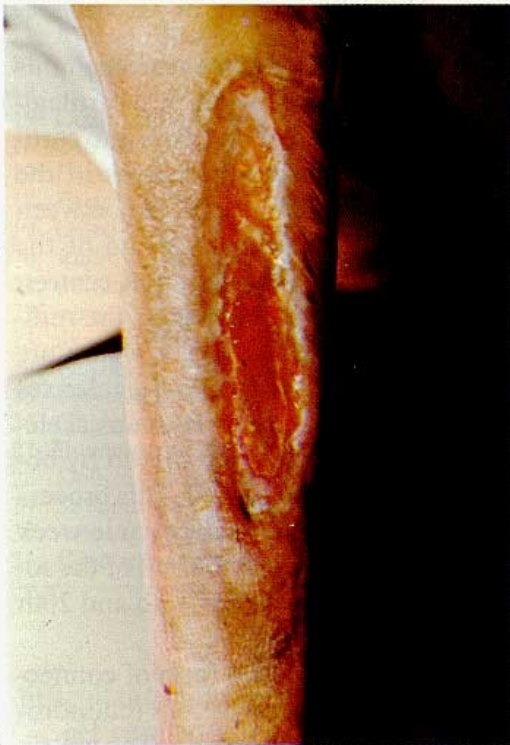
c



a



b



c

Fig. 296 a-e:

Ulcus cruris through wound inflicted in war

Most serious ulcer on the lower leg persisting for more than 30 years as a sequel of a wound afflicted in the war, in a patient now 63 years old.

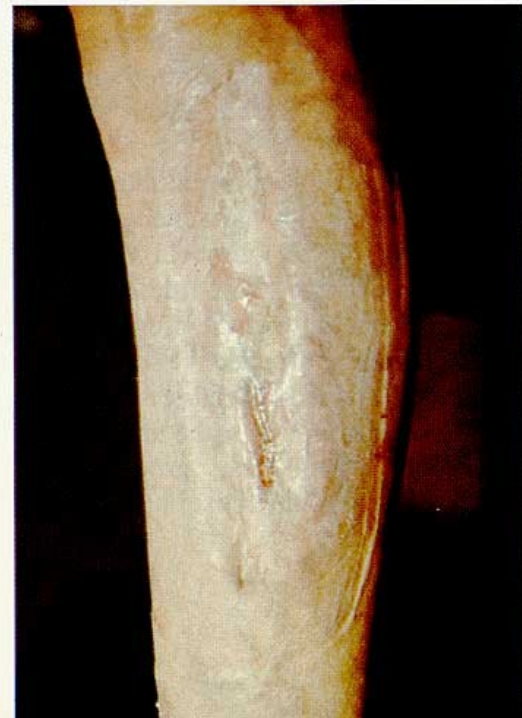
The patient's general condition had worsened to an extent bad enough to justify the idea of amputation for vital reasons. To this, however, the patient resists, because he heard about cell-therapeutic alternatives.

Injection of 1 ampoule of Resistocell® (= 100 mg of fetal mesenchyme) (fig. 296 c).

Two months later, the extensive ulceration appeared virtually clean, without any additional surgical measure applied (fig. d). Three months after initiation of cell therapy (fig. e) and after a total lapse of 4 months, the leg, which had persisted in a damaged condition continually for more than 30 years owing to a wound inflicted in the war, was completely healed so that the patient was discharged from the clinic and can now take his daily walks without any complaints (HAGMEIER, 1978).



d



e