Generalized doxorubicin-induced radiation recall dermatitis following total skin electron beam therapy

Carl Lamoureux[1], Emilie Gerard[1], Nora Ouhabrache[2], Feyrouz Toukal[1], Anne Pham-Ledard [1,3], Marie Beylot-Barry[1,3]

1: Dermatology Department, 2: Radiotherapy Department, CHU Bordeaux, 3: INSERM U1053, Bordeaux research in Translational Oncology, Team 3 oncogenesis of cutaneous lymphomas, Univ. Bordeaux, France

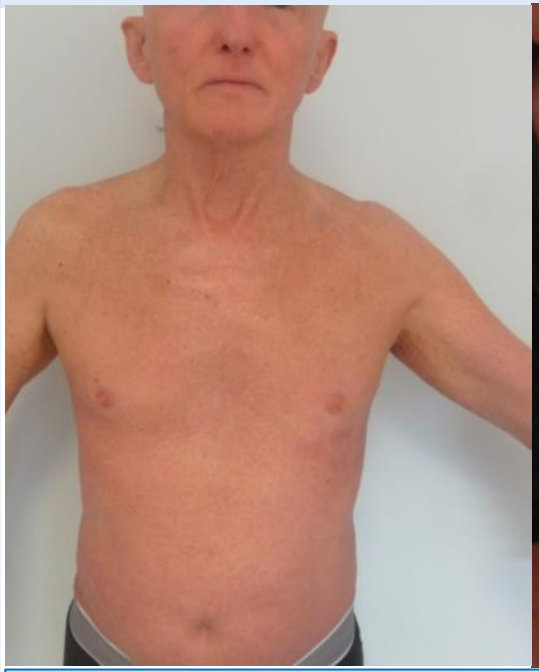


67-year-old man
Erythrodermic MF for 4 years (previous TTT : methotrexate, bexarotene, gemcitabine, romidepsine
Persistence of **pruriginous erythroderma**
➔ **12 Gy low-dose TSEBT**

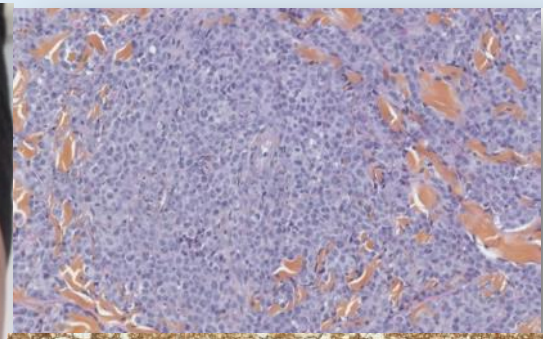
TSEBT 12 Gy

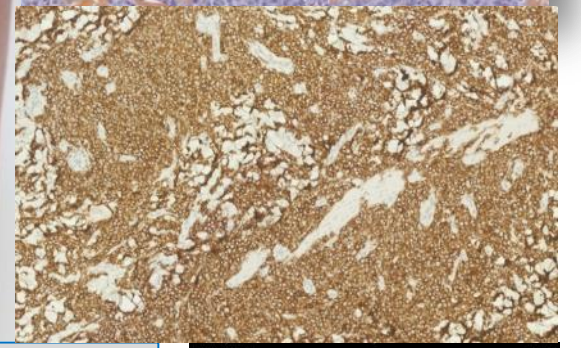
1rst-19th June

6 weeks later









regression of erythroderma
But : left inguinal lymph nodes + nodules
Skin biopsy : **CD30+ transformed MF.**
CT-scan : superficial and deep lymph nodes.
➔ **1rst cycle of CHOP**

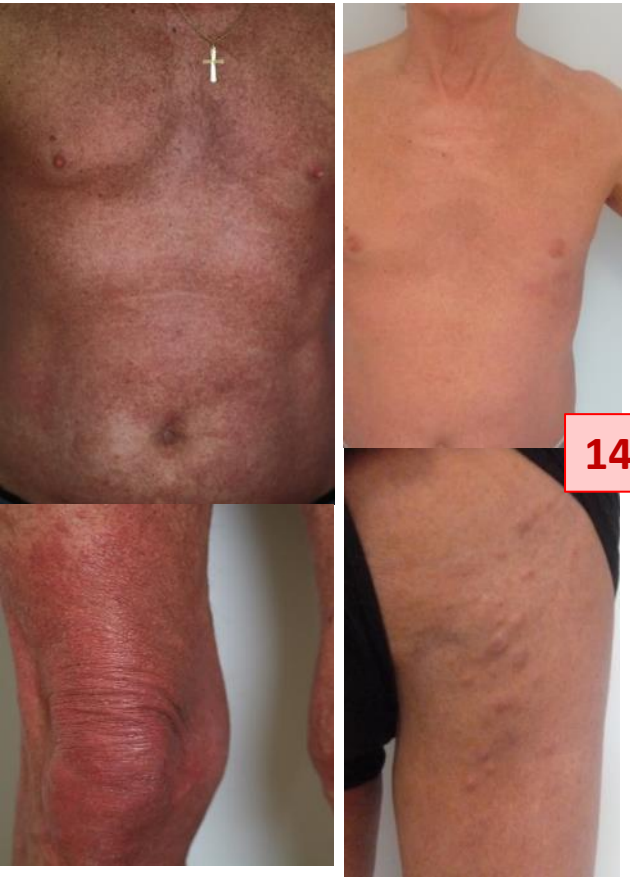


CHOP

14th August

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TSEBT 12 Gy

CHOP

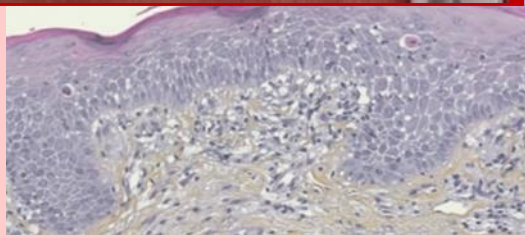
14 days later



Acute desquamative erythroderma + palmoplantar keratoderma.

Biology : normal (including flow cytometry)

Skin biopsy : no recurrence of MF but keratinocytes necroses and lichenoid infiltrate



➔ **Generalized radiation recall dermatitis post- TSEBT**

1rst-19th June — 14th August — **4th September**

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Chemotherapy resumed, excluding doxorubicin

- **No relapse of erythroderma**

But the patient died 3 months later due to macrophage activation syndrome.

Resolution within 5 days with topical corticosteroids.

TSEBT 12 Gy — 1rst-19th June

CHOP — 14th August

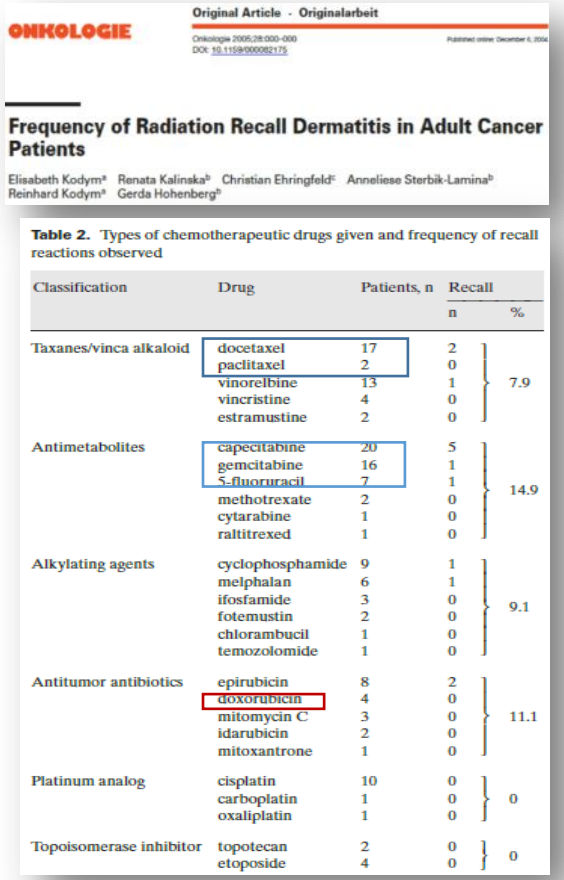
Generalized radiation recall dermatitis — 4th September

COP — 25th September

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- **Radiation recall dermatitis : unpredictable acute inflammatory tissue reaction, confined to previously irradiated areas, triggered by drugs such as doxorubicin, gemcitabine and taxanes (breast cancers++)**
- **Within days (median delay = 40 days) following the first exposure of chemotherapy**
- **On a previously intact skin without adverse reaction during or just after radiotherapy**
  - **Biopsy is not mandatory except when a differential diagnosis needs to be excluded.**
  - **Supportive care with topical or systemic corticosteroids to reduce inflammation**
  - **No-rechallenge**



ONKOLOGIE

Original Article · Originalarbeit

Frequency of Radiation Recall Dermatitis in Adult Cancer Patients

Elisabeth Kodym[a] Renata Kalinska[b] Christian Ehringfeld[c] Anneliese Sterbik-Lamina[b] Reinhard Kodym[a] Gerda Hohenberg[b]

Table 2. Types of chemotherapeutic drugs given and frequency of recall reactions observed

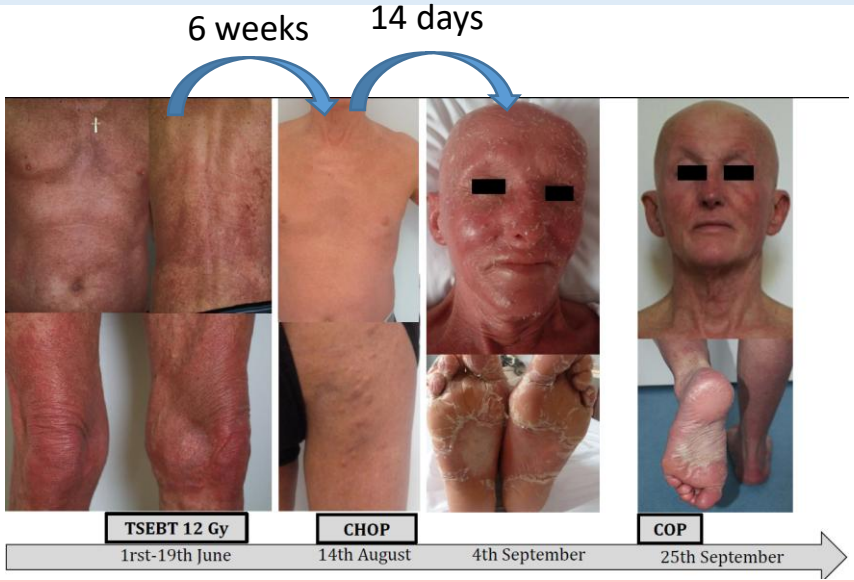
Classification	Drug	Patients, n	Recall n	Recall %
Taxanes/vinca alkaloid	docetaxel	17	2	7.9
	paclitaxel	2	0	
	vinorelbine	13	1	
	vincristine	4	0	
	estramustine	2	0	
Antimetabolites	capecitabine	20	5	14.9
	gemcitabine	16	1	
	5-fluoruracil	7	1	
	methotrexate	2	0	
	cytarabine	1	0	
	raltitrexed	1	0	
Alkylating agents	cyclophosphamide	9	1	9.1
	melphalan	6	1	
	ifosfamide	3	0	
	fotemustin	2	0	
	chlorambucil	1	0	
	temozolomide	1	0	
Antitumor antibiotics	epirubicin	8	2	11.1
	doxorubicin	4	0	
	mitomycin C	3	0	
	idarubicin	2	0	
	mitoxantrone	1	0	
Platinum analog	cisplatin	10	0	0
	carboplatin	1	0	
	oxaliplatin	1	0	
Topoisomerase inhibitor	topotecan	2	0	0
	etoposide	4	0	

Burris HA. 3rd, Hurtig J. Radiation recall with anticancer agents. Oncologist. 2010;15:1227-37.

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First reported case of generalized radiation recall dermatitis following TSEBT

"Erythrodermic" presentation due to the fact that TSEBT was used.

Low doses did not prevent this event

RRD in patients treated by TSEBT not previously reported because chemoTTT is exceptionally required immediately just after

Even if rare and exceptionally widespread, RRD must be evoked and distinguished from initial MF whom management is obviously distinct