

A REVOLUTIONARY NEW COMBINED TREATMENT FOR AGGRESSIVE KELOID TUMOURS WITHOUT NEED FOR SURGERY: A PATIENT SERIES

John Glees¹ MD, FRCR, DMRT, Patricia Yap² BSc, MBBS, Dip Derm and Henry Weatherburn¹ PhD

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1. Icon Cancer Centre London, 49 Parkside, London SW19 5PU;
2. Jamica Keloid Research Foundation

Running Title

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BACKGROUND

When the treatment for keloids is undertaken using a monotherapy, e.g. surgery alone, or radiotherapy alone, significant recurrence rates have been reported and, consequently, keloid treatment procedures normally employ a combination of treatments, e.g. surgery immediately followed by radiotherapy, with much lower recurrence rates reported.¹ However for patients who have aggressive (and frequently recurrent) keloids, particularly at: individual difficult to excise anatomical sites; or at multiple sites, this approach may not be practicable, especially in patients who have had previous excisions and are unwilling to undergo further surgery, or for patients who simply wish to avoid surgery.

In such cases, a previously reported practicable non-surgical approach to treatment is the topical application of a low molecular weight (LMW) corticosteroid cream (Keloflat), which achieves penetration through the basal layers of the skin: this has shown promising results, some in combination with the use of steroid injections.² & ³ A subsequent case study has also reported successful use of this cream as an adjunct to surgery for a recurrent keloid.⁴ Separately, for recurrent keloids (previously treated by surgery and radiotherapy with a 5 year recurrence rate of 14.7%⁵), a subsequent course of fractionated superficial X-ray radiotherapy (SXRT) has shown low recurrence rates for such keloids.⁶ (Updated results to this latter study can now be reported: these show that 3/23 [13%] of such patients exhibited a recurrence some 5 to 6 years post completion of treatment).

Against this background, the desirability and the practicality of a dual non-surgical approach to keloid treatment, with the concurrent use of the topical cream and fractionated SXRT, was considered by the authors reporting these studies. A protocol was then developed which integrated application of the topical cream with a fractionated course of SXRT over a period of up to 1 year.

METHODS

The following “Keloflat and Fractionated SXRT” treatment protocol was employed:

1. Daily topical application of the LMW corticosteroid steroid (Keloflat) cream;
2. A course of SXRT at 60kV, 100kV or 140kV (dependant on keloid thickness) in 4 treatment fractions, each of 4 Gray (Gy), at quarterly intervals;
3. Both courses of treatment scheduled concurrently for 1 year; and
4. Patient review at quarterly intervals since, as reported in previous studies,² &

6 earlier treatment responses have sometimes been separately observed either with the use of the topical cream, or following 2 or 3 SXRT treatment fractions. In the case of an early treatment response, treatment to be discontinued at this stage.

5. End points for success of this protocol are: non recurrence of treated keloid(s); minimal skin reaction; non induction of malignancies; and possible shortened timescales for completion of treatment (i.e. from 12 months to 3,6, or 9 months).
6. Endpoints to be audited.

RESULTS

To date 7 patients have been treated using this protocol:

Patient 1 (ZU): Gender: Male; Ethnicity: Black; Treatment Site: Scalp*

Patient 2 (GO): Gender Male; Ethnicity: White; Treatment Site: Face

Patient 3 (KA): Gender: Male; Ethnicity: Mixed; Treatment Site: Sternum

The protocol was implemented in July 2025 and, in the subsequent 9 months, significant regression has been identified in all of the keloids treated, with minimal skin reactions. Further patients are in the process of being scheduled for treatment following this protocol.

*The first patient's keloid was initially extensive and, surgery (possibly followed by skin grafting) prior to radiotherapy, as per our standard protocol, was avoided.

A further patient, who exhibited a keloid recurrence after treatment by our standard "Surgery and Single Fraction SXRT" protocol⁵, started treatment with Keloflat only and her progress is being monitored with a view to initiating SXRT treatment, dependant on her progress..

CONCLUSION

To date progress to successful treatment outcomes can be reported for patients who have been treated by the "Keloflat and Fractionated SXRT" protocol, who would otherwise have had surgery, possibly involving skin grafts, followed by radiotherapy.

This mode of treatment looks very promising and could

potentially revolutionise keloid treatment by offering a viable non-surgical alternative to current treatment with surgery followed by radiotherapy, as well as being a viable alternative to other treatment methods.

Use of this approach to treatment is ongoing and future reporting of audit results of patient outcomes is planned.

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