IN SITU TISSUE ENGINEERING WITH INTEGRA
THE RECONSTRUCTIVE UTILITY OF A DERMAL REGENERATION TEMPLATE

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INGENIERÍA DE TEJIDOS IN SITU CON INTEGRA  La Utilidad Reconstructiva de una Plantilla de Regeneración Dér mica

Something beautiful from a harsh landscape.  Springtime in the Sonoran Desert  Algo hermoso de un paisaje áspero.
Biological Effects of Integra

Single device - dual role:
1 - high grade acute artificial skin.
2 - then becomes the skin regenerant.

Not alive, tolerates adverse conditions.
“Hides” wound from the host.
Eliminates inflammation.
Controls pathological behavior.

Embryonic neodermis.
No scar.
No contraction.

Tangential histoconduction.

Effects on acute wounds:
Immediate wound closure.
Controls effects of inflammation.
Minimizes pathergy and injury.

Effects on chronic wounds:
Survives harsh wound conditions.
Eliminates inflammation.
Stabilizes pathological CAP wounds.
69 f

hyper-coagulable

protein C cryoglobulins
77 f
Sjogren's
### Integra for chronic pathological wounds - Outcomes, by diagnosis

<table>
<thead>
<tr>
<th>Diagnostic category</th>
<th>fully healed</th>
<th>&gt; 2/3 healed</th>
<th>&lt; 2/3 healed</th>
<th>failed</th>
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</thead>
<tbody>
<tr>
<td>Macro-arterial</td>
<td>58</td>
<td>8</td>
<td>16</td>
<td>18</td>
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<tr>
<td>Immunopathic</td>
<td>74</td>
<td>16</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Venous / lymphedema</td>
<td>88</td>
<td>---</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Hypercoagulable</td>
<td>86</td>
<td>---</td>
<td>14</td>
<td>0</td>
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<td>Mechanical / anatomical</td>
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<td>0</td>
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<td>Radiation / malignancy</td>
<td>72</td>
<td>28</td>
<td>---</td>
<td>0</td>
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<tr>
<td>Diabetes / neuropathy</td>
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<td>20</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Unknown</td>
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<td>0</td>
</tr>
<tr>
<td>Micro-occlusive</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>Trauma / surgery</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>Granulomatous / infectious</td>
<td>50</td>
<td>50</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>Adjunct</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
<td><strong>10</strong></td>
<td><strong>10</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Integra used to close chronic wounds.

**120 patients.**

90% of exposed bones, joints, tendons and organs were successfully closed.

If patients now recognized as poorly selected are excluded (extreme arterial insufficiency, and diabetic plantar ulcers), the success rate for healed wounds was **92%**.

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THE RECONSTRUCTIVE UTILITY OF A DERMAL REGENERATION TEMPLATE

Chronic Wounds

Reconstruction
PARADIGMS OF CONVENTIONAL WOUND CLOSURE & RECONSTRUCTION

All depend on normal post-inflammatory wound healing.

0 - Topical Care & Natural Contraction

1 - Simple Repairs

2 - Grafts

3 - Flaps
About Surgery . . .

Surgery cures many problems. It should be used when appropriate.

For some problem wounds, conventional surgery can solve the problem, but it might be best avoided due to unreasonable risks of failure or risk to the patient.

There are some problem wounds that conventional surgery simply cannot solve.

About Flaps . . .

Flaps are the romantic heroes of reconstructive plastic surgery. They have a pivotal role in the closure of complex wounds.

When the stakes are high for successful closure, good flaps get the job done.

. . . BUT . . .

There are times when flaps simply cannot be done or will not survive.

Sir Flapalot
A FOURTH INDEPENDENT PARADIGM OF SURGERY

In-Situ Tissue Engineering

Integra is a distinct paradigm of surgery, in-situ tissue engineering, independent of normal wound healing (unlike repairs, grafts, flaps). It suppresses normal repair, and it initiates embryonic histogenesis.

*It succeeds where conventional modalities fail.*

Integra: not an Alternative, the Indicated Option

In cases presented, Integra was the preferred option, not just because flaps and grafts were ineligible, but because it was the best modality —

*Superior results with less risk.*

The Knight of Pathological Wounds

There are many wounds that conventional surgery simply cannot solve. Flaps remain the heroes of reconstructive plastic surgery. But for closing problem wounds,

*Integra is the modern Excalibur.*
Understanding when a flap should be used, but cannot be used, is to understand when Integra should be used in lieu of conventional surgery.
Benefits & Virtues

Critical coverage,
Acute care of patient,
Acute preservation & closure of wound,
Major trauma and illness.
Rapid closure of wound.
Mitigation of inflammation.
Averts secondary necrosis and inflammation.
Mitigation of fluid losses, pain, etc.
Quickly applied.
No donor sites or additional trauma.
No risk to patient.
No interference or compromise of subsequent care.

Biological superdressing,
Chronic and pathological (CAP) wounds.
Same as above.
Tolerant of adverse conditions.
Control of persistent wound pathology.
Eligible for reapplication.

Essential coverage,
Acute preemptive reconstruction.
Closes and protects structures.
Comparable to flaps.
Applied acutely, contractures are avoided.
Joint mobilization is sooner and more effective.
Less need for subsequent rehabilitation.
Better cosmesis.
Prevent late reconstruction.
Preserves options for later reconstruction.

INTegra COLLAGen-GAG MATIX

THE RECONSTRUCTIVE UTILITY OF A
DERMAL REGENERATION TEMPLATE

Chronic Wounds

Reconstruction

Reconstruction,
Late restoration of altered or missing features.
Same as above.
Correction of contractures.
Correction of skin quality.
Avoids or corrects scars and contractures.
No donor sites.
Sustained correction.
Superior to skin grafts.
Comparable to flaps.
Superior to flaps in select areas (e.g. dorsum of hand).
58 m intra-arterial injection injury
44 f  achilles rupture  hypercoagulable (anticardiolipin)
INTEGRA
SKIN & SURFACE
RESTORATION
& RECONSTRUCTION

Temporary skin substitute

Flap donor site coverage

Visceral coverage
INTEGRA
RECONSTRUCTION
OF DEEP
TISSUES & DEFECTS

Flap delay

Histoconductive
dead space filler
Protecting and promoting flap delay
Dead space filler
INTEGRA
RECONSTRUCTION
OF DEEP
TISSUES & DEFECTS

amputations

limb preservation
dermatofasciectomy
Amputation & limb preservation
Dermatofasciectomy

(Primary lymphedema)
Dermatofasciectomy

( CAP wounds)
INTegra

Collagen-Gag Matrix
Dermal Regeneration Template

Versatile
Reconstructive Agent

For
A broad range of pathologies, clinical problems, and anatomical areas.

Solves problems when flaps should be used but cannot be used.

Characteristics like dermis - no scar, no contractures.

Solves wound healing impaired chronic and pathological wounds.
INTEGRA - PRESENTATIONS ARE ON THE WEBSITE

arimedica.com

arimedica.com/subjects_integra.htm

Managing Complex and Pathological Wounds with Integra - A Gallery of Cases et al.

Something beautiful for all seasons. Winter Storm in the Sonoran Desert Algo hermoso para todas las estaciones.
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