

**Comparative Study Between Recent  
Protocols For Management Of Extensive  
Burns During The Acute Phase**

*Essay*

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## رسالة

توطئة للحصول على درجة الماجستير فى الجراحة العامة

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## **LIST OF ABBREVIATIONS**

|             |   |
|-------------|---|
| ACS         | : Abdominal compartment syndrome                                  |
| ARF         | : Acute renal failure   |
| %burn       | : %total body surface area  |
| BEE         | : Basal energy expenditure  |
| COX         | : Cyclooxygenase  |
| CEA         | : Cultured epithelial autograft                                   |
| D5W         | : Dextrose 5% in water solution                                   |
| EGF         | : Epidermal growth factor   |
| IAH         | : Intra-abdominal hypertension                                    |
| KGF         | : Keratinocyte growth factor                                      |
| NF-KB       | : Nuclear factor-kappa B  |
| RL          | : Ringer Lactate.   |
| TBSA        | : Total body surface area   |
| W xsec/g xK | : (Watt times seconds of heat per gram mass times degrees Kelvin) |

# **Introduction and Aim of the work**



**Pathophysiology of burn  
including degrees of burn  
and complication of  
extensive burn**

**Initial management of  
extensive burn (acute  
phase) including facilities,  
equipment required in the  
specialized centers**

# **Different protocols in management of extensive burn**

# References

# Summary

# **Arabic Summary**

**Table (13): Available Bioactive Temporary Skin Substitutes (*Miller E and Gay, S 2002*)**

| Product            | Company                                   | Tissue of Origin                               | Layers  | Category   | Uses  | How supplied   |
|--------------------|---|--|---|--|---|--|
| Human allograft    | Skin bank                                 | Human cadaver                                  | Epidermis and dermis  | Split thickness skin   | Temporary coverage of large excised burns                                       | Frozen in rolls of varying size                        |
| Pig skin Xenograft | Brennan Medical St. Louis, Mo             | Pig dermis                                     | Dermis  | Dermis   | Temporary coverage of partial thickness and excised burns                       | Frozen or refrigerated in rolls                        |
| Human amnion       | On site procurement                       | Placenta                                       | Amniotic membrane   | Epidermis Dermis   | Same as above   | Refrigerator   |
| Oasis              | Healthpoint LTD San Antonio, Tx           | Xenograft                                      | Extracel lunar wound matrix from small intestine submucosa                        | Bioactive Dermal like Matrix   | Superficial burns, Skin graft donor sites, Chronic wounds                       | Room T° storage<br>Multiple sizes<br>3x3.5cm<br>7x20cm |
| Biobrane           | Dow Hickam/Bertek pharmaceuticals         | Synthetic with added denatured bovine collagen | Bilayer product<br>outer silicone<br>Inner nylon mesh with added collagen         | Synthetic epidermis end dermis                                       | Superficial partial thickness burns, Temporary cover of excised burns           | Room T° storage 15x20 inch 10x15cm 5x15inch 5x5 inch   |
| Transcyte          | Smith & Nephew Wound Management Largo, FL | Allogenic Dermis                               | Bilayer product<br>Outer silicone<br>Inner nylon seeded with neonatal fibroblasts | Bioactive Dermal Matrix Components on Synthetic dermis and epidermis | Superficial to mid-Partial thickness burns, Temporary coverage of excised burns | Frozen 5x7.5inch sheets                                |