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| **Authors, Year** | **Product** | **Origin** | **Surgical Site** | **Number of patients** | **Outcome** |
| Helling et al ., 2006 (1) | AlloDerm | Human  | Palate  | 31 patients | A lower fistula formation rate was seen compared to traditional methods.  |
| Mirzai et al., 2021 (2) | AlloDerm | Human | Nasal Septal | 5 patients | No crusting, empty nose syndrome, postoperative hemorrhage, further procedures, recurrence or persistent perforations, or other problems.All patients’ preoperative symptoms had improved. |
| Zhong et al., 2019 (3) | Heal-All (Yantai ZhenghaiBio‐technology Ltd Co.) | Animal (bovine) | Nasal cavities | 31 patients | No evident side effects or problems.At eight weeks, Lund-Kennedy scores in the ADM group were considerably lower than those in the control group.The ADM group’s eight-week epithelialization period was substantially shorter than the 14-week control group. |
| Conrad et al., 2018 (4) | AlloDerm | Human | Nasal Septal | 12 patients | Complete closure of the septal hole was effective in 10 of 12 patients. |
| Zhong et al., 2019 (5) | AlloDerm | Human | Skull base | 46 patients | ADM's postoperative results were similar to Turbinate Flap's.ADM may be a safe and practical option for endoscopic CSF rhinorrhea correction following skull base tumor resection.In both groups, no recurrence was identified. |
| Youngerman et al., 2020 (6) | AlloMAX | Human  | Skull base | 19 patients | ADM is as effective as fascia lata graft in rhinorrhea repair. It is also associated with a reduced risk of donor site morbidity compared to the traditional method. |
| Lee et al., 2018(7) | MegaDerm | Human | Tympanic membrane | 60 patients | ADM was associated with successful results. both group (ADM versus tagal perichondrium) had comparable results regarding graft success and hearing. Moreover, ADM was associated with a shorter surgery time |
| Park et al., 2022 (8) | AlloDerm | Human | Nasal cavity | 145 patients | The study showed that ADM is an ideal substitute for primary and revision dorsal augmentation rhinoplasty. Also, ADM was associated with low complications. |
| Yang et al., 2018 (9)  | MegaDerm | Human  | Nasal cavity | 18 patients | They showed that ADM is a suitable substitute for autologous materials. It has a similar success rate with a very low complication rate. It also eliminates the donor site morbidity associated with autologous grafts. |
| Heo et al., 2022(10) | AlloDerm | Human | Chest wall | 6 patients | ADM cannot offer sufficient stiffness to preserve thoracic organs. Hence bone cement is applied between ADM.Primary closure was accomplished on exterior wounds in all patients without overlaying soft tissue defects.There were no significant complications found. |
| Giordano et al., 2020 (11) | STRATTICE | Animal tissue (porcine) | Chest wall | 146 patients | The patients in the ADM group had less surgical site infection rate than the synthetic mesh group.  |
| Hansson et al., 2021 (12)  | Veritas Collagen Matrix | Animal tissue (bovine) | Breast  | 24 patients | ADM was associated with a higher implant loss infection rate than synthetic mesh. |
| Dikmans et al., 2017 (13) | STRATTICE | Animal tissue (porcine) | Breast  | 142 patients | ADM was associated with more complication rates, including higher skin necrosis, hematoma, and wound infection. However, the seroma rate was lower in the ADM group. |
| Tierney et al., 2022 (14) | SimpliDerm - a novel human ADM and AlloDerm Ready-To-Use (RTU) - an established ADM  | Human | Breast | 107 patients | 27 patients (25.2%)suffered from total of 35 side effects including infection(22.9%), flap ischemia(25.7%) and seroma(14.3%) |
| Negenborn et al., 2019 (15) | STRATTICE Reconstructive Tissue Matrix (RTM) | AnimalTissue(porcine) | Breast | 59 patients | Surgical complications in one-stage implant-based breast surgeries with ADM group were about 3 times more than in the two-stage implant-based breast surgeries group.The usage of ADM was accompanied with improved aesthetic outcomes. |
| Jones et al., 2019 (16) | AlloDermRTM | Human | Breast | 94patients | Better clinical and functional outcomes, minimum pain, and improved convenience in patients using ADM |
| Brunbjerg et al., 2021 (17) | STRATTICE | AnimalTissue(porcine) | Breast | 44 patients | High levels of satisfaction with aesthetic outcomes in patients using ADMAttain an implant-based breast reconstruction with lesser surgeries and outpatient visits in patients using ADM. |
| Khan et al., 2021 (18) | Surgimend | Animal tissue(bovine) | Breast | 65 patients | Low complications and reconstructive failure rates were associated with pre-pectoral implant-based breast surgeries utilizing ADM in patients. |
| Lohmander et al., 2019 (19) | STRATTICE Reconstructive Tissue Matrix (RTM) | AnimalTissue(porcine) | Breast | 64patients | implant-based breast surgeries with ADM group experienced more overall complications and reoperations and higher risks of wound healing complications in comparison with the group undergoing implant-based breast surgeries without ADM |
| Fakim et al., 2019 (20) | Artia (LifeCell, NJ) | Animal tissue(porcine) | Breast | 51patients | Usage of Artia™ was correlated with low and satisfactory early complication rates. |
| Catellani et al., 2018 (21) | Braxon | Animal tissue(porcine) | Breast | 84patients | Pre-pectoral muscle-sparing ADM-wrapped implants resulted in lesser pain intensities and notable upper limb functional benefits in comparison with sub-muscular implant placements. |
| Powell et al., 2018 (22) | STRATTICEReconstructive Tissue Matrix (RTM) | AnimalTissue(porcine) | Breast | 84patients | High levels of satisfaction and low levels of adverse effects including infection, seroma, and hematoma but high levels of skin flap necrosis |
| Lohmander et al., 2021 (23) | STRATTICE pliable (Acelity, San Antonio, TX) | AnimalTissue(porcine) | Breast | 135patients | Immediate use of ADM did not associate with fewer reoperations in comparison to implant-based breast reconstruction without ADM, and also satisfaction with aesthetic outcomes was equal in both groups. |
| Daninoet al., 201as9 (24) | AlloDermRTM | Human | Breast | 6 patients | The presence of bacterial biofilms on ADMs in all patients suffering from red breast syndrome was observed. |
| Levy et al., 2020 (25) | AlloMax | Human | Breast | 174patients | Overall infection rates and time to drain removal were notably higher in the ADM group in comparison with the P4HB group, but rates of seroma were equal in both groups. |
| Brewer et al., 2010 (26) | AlloDerm | Human | Abdomen  | 104 patients | They showed that ADM is associated with a lower recurrence rate compared to synthetic mesh. |
| Garvey et al., 2016 (27) | AlloDerm and SurgiMend | Human and bovine | Abdomen | 512 patients | Long-term results of abdominal wall reconstruction are improved by using ADM. |
| Butler et al., 2004 (28) | AlloDerm | Human | Abdomen | 19 Hartley guinea pigs | In abdominal hernia repair, visceral adhesion to the repair site is seen much more in the polypropylene method than when AlloDerm is used. |
| Han et al., 2010 (29) | Ruinuo | Human | Pelvis | 12 patients | ADM can be an appropriate choice for the reconstruction of large pelvic defects in the patients after cylindrical abdominoperineal resection. |
| Musters et al., 2016 (30) | Transperineal STRATTICE , Transperineal Permacol | Porcine | Pelvis | All consecutive patients who underwent a perineal hernia repair between March 2010 and April 2014 at the Academic Medical Center, Amsterdam | Using biological mesh repair of a perineal hernia after APR can lead to a high recurrence rate. |
| Coon et al., 2016 (31) | Alloderm, AlloMax, SurgiMend, Veritas, or STRATTICE | Human | Posterior trunk | 260 patients | an increased risk of infection and seroma with the use of biological tissue matrix in posterior trunk reconstruction is expected. Be aware of the possible risks and benefits of using this product. |
| Martell et al., 2009 (32) | AlloDerm®, | Human | Extremity (fascial of the lower limb) | 1 patient | The use of ADM in the fascial reconstruction of the lower limb had favorable results. |
| Cole et al., 2018 (33) | ArthroFlex® |  | Extremity (Achilles tendon) | 9 patients | Tendon repair is successful with ADM due to the robustness of the minimally changed scaffold that gives additional repair stability, an ideal host for native cells, and a vessel ready to be replaced by native tissue. |
| Melandri et al., 2020 (34) | MODA (Matrice Omologa Dermica Acellulata) | Human | Extremity (extremity wounds with exposed tendons) | 1 patient | Tendon repair is successful with the use of an acellular human dermal membrane due to the robustness of the minimally changed scaffold that gives additional repair stability, an ideal host for native cells, and a vessel ready to be replaced by native tissue. |
| Lee et al., 2022 (35) | Insuregraf |  | Extremity (flexor tendon injury in hand Zones III, IV, or V) | 13 patients | The use of ADM in the repair of the flexor tendons of the III, IV, and V sections of the hand showed favorable results, including the prevention of peritendinous adhesions and the improvement of postoperative function. |
| Scalise et al., 2017 (36) | Integra® | AnimalTissue(bovine & shark) | Extremity (plantar region) | 2 patients | Results of heel reconstruction using ADM, including optimal recovery of gait function and social participation. According to gait analysis, measured gait and posture are essentially normal. Nevertheless, the study of the pressure distribution reveals a small imbalance. |
| Fiedler et al., 2017 (37) | Singlelayer bovine acellular dermal matrix grafts (Thin;Integra Life Sciences, Inc., Plainsboro, NJ). | AnimalTissue(bovine) | Extremity (nail bed) | 2 patients | Monolayer bovine acellular dermal matrix was used to reconstruct the sterile nail bed, but this kind of acellular dermal matrix grafting was not recommended for germinal matrix injuries to the nail bed. |
| Liu et al., 2020 (38) | Acellular dermal matrix (PELNACfi, Gunze Corp.,Osaka, Japan) |  | Extremity (nail bed) | 4 patients | Acellular dermal matrix and subsequent skin graft can be utilized to repair nail bed injuries and loss of germinal matrix. However, this approach may not be suitable for patients with complex crush trauma. |
| Askari et al., 2011 (39) | AlloDerm | Human | Extremity (hand & wrist) | 9 patients | ADM can be utilized effectively in extremity burn repairs by minimizing wound contractions, lowering the risk of recurrence, and improving function. |
| Shang et al., 2021 (40) | Allogeneic |  | Extremity (hand) | 32 patients | ADM can be utilized effectively in extremity burn repairs by minimizing wound contractions, lowering the risk of recurrence, and improving function. |
| Cazzell et al., 2019 (41) | DermACELL |  | Lower extremities(DFUs) | 61 patients | ADM has been deemed successful in closing DFUs. |
| Demircan et al., 2015 (42) | Collagen elastin matrix | Animal tissue (bovine) | Burn | 15 children | Graft quality was close to normal skin in terms of vascularity, elasticity, pliability, texture, and color.Fast recovery with satisfactory aesthetic and functional results. |
| Heimbach et al., 2003 (43) | Integra™ | Animal tissue (bovine) | Burn | 216 patients | Integra helps in the treatment of burn wounds by reducing the possibility of invasive infection. |
| Okuno et al., 2018 (44) | PELNAC® | Human | Burn | 36 patients | It is useful for blocking invasive infections and the development of yeast in burn patients, based on the clinical results obtained. |
| Guo Z-Q, et al., 2016 (45) | Porcine ADM | Animal tissue (porcine) | Burn | 60 adult patients | Reduction of hospitalization time.Wound healing.Improving aesthetic and functional results. |
| Moiemen NS et al., 2010 (46) | Integra™ | Animal tissue (bovine) | Burn | 8 patients | The formation of hematoma and seroma, as well as shear forces, were greatly reduced with the use of TNP. |
| Bloemen MCT et al., 2010 (47) | Matriderm® | Animal tissue (bovine) | Burn | 46 patients | The surface of the scars is much smoother, which is very important in terms of aesthetics.The autograft had given elasticity to the treated scars to a great extent. |

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