Why Should I Want To Become A Surgeon

• To make a lot of money?
  • NOOOOO!!!!!!

• To do cool things?
  • NOOOOO!!!!!!

• To help people?
  • Maybe

• To Glorify God!!!!!!!

• “whatever you do, do all to the glory of God” 1 Cor. 10:31
How Do I Become a Surgeon

• College: 4yrs $100,000 +
• Medical School: 4 yrs $250,000 +
• Residency: 4-10 yrs (ave 80hrs/wk)
  • May change with ACA
• Finally I can get a job.
  • May Change with the ACA
Professional Development

- Wheaton College, Wheaton Ill.
- Wayne State University Medical School
- Wayne State University Residency in General Surgery
- Fellowship Trauma
Wheaton College
Detroit Receiving Hospital
Mentors
What Do I Get to Learn?

• “Come let us reason together saith the LORD, Though your sins be as scarlet, they shall be white as snow, though they are red like crimson they shall become like wool.”  Isa. 1:18
Eber’s and Smith Papyrus
Wound Care by the Ancients

- Inspection of wounds
  - An ailment to treat
  - An ailment with which to contend
  - An ailment not to be treated
- Making Plasters
- Bandaging the wound
The Alexandrian School

• Cardinal signs of inflammation
  • Rubor
  • Tumor
  • Calor
  • Dolor

• Galen vs. Erasistratus
Ancient Battle Field Wounds
Medieval Medicine
Theodoric and the Salernitan School

- Remove Foreign matter
- Re-approximate the separated parts
- Preserve the parts in their original form
- preserving and conserving the substance
- correcting complications
Renaissance
The Rebirth of Medicine

Ambroise Pare: the use of suture ligature

Andreas Vesalius: reestablished observational science
Enlightenment: Age of Antisepsis
Progress of the 19th Century

Semmelweis

Lister

Pasteur
The American Experience
Advent of Modern Wound Care
MMP-1, 2, 3, 13
PDGF/TDF etc.

Macrophage
Inhibit
Promote

Fibroblast

MMP-1,2,3,13
PDGF/TDF etc.
Case Report 1

• 84 year old lady with open fracture lower tibia.
  • Problems
    – Open bone
    – External fixation
    – Not candidate for free flap
Case 4

• Patient with insulin dependant Diabetes Mellitus and Necrotizing Fasciitis
  – Problems
    • Renal failure
    • Unstable wound
    • Respiratory Failure requiring mechanical ventilation
    • Sepsis

  » Failure of STSG 10%-25% Peacock. Wound Repair 1984 pg.209
Pre-OP Two Week Later
Healed Integra
Case 5

• Large Traumatic Wounds
  – Problems
    • Exposed vessels
    • Potential for infection
    • Large surface area
    • Never done before
Corn picker injury right arm
Integra take
Integra take in the face of Actinomycosis
Case 9

- Motor Vehicle Accident Ped. vs. Car 15 y/o with severe crush injury to leg.

- Significant muscle loss exposed hardware and large soft tissue deficit.
Case 10

• 21 y/o with crush injury from a fork lift. Rectal injury, pelvic fracture, significant tissue loss with infection within 48 hours.
Figure 1. Genetic Similarity of *Salmonella enterica* Serotype Typhi and *Escherichia coli*.
Typhoid Fever

• Causative Agent:
  • Salmonella enterica

• Causes:
  • Ingestion of contaminated water or food.
<table>
<thead>
<tr>
<th>Table 1. Important Complications of Typhoid Fever.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal</td>
</tr>
<tr>
<td>Gastrointestinal perforation</td>
</tr>
<tr>
<td>Gastrointestinal hemorrhage</td>
</tr>
<tr>
<td>Hepatitis</td>
</tr>
<tr>
<td>Cholecystitis (usually subclinical)</td>
</tr>
<tr>
<td>Cardiovascular</td>
</tr>
<tr>
<td>Asymptomatic electrocardiographic changes</td>
</tr>
<tr>
<td>Myocarditis</td>
</tr>
<tr>
<td>Shock</td>
</tr>
<tr>
<td>Neuropsychiatric</td>
</tr>
<tr>
<td>Encephalopathy</td>
</tr>
<tr>
<td>Delirium</td>
</tr>
<tr>
<td>Psychotic states</td>
</tr>
<tr>
<td>Meningitis</td>
</tr>
<tr>
<td>Impairment of coordination</td>
</tr>
<tr>
<td>Respiratory</td>
</tr>
<tr>
<td>Bronchitis</td>
</tr>
<tr>
<td>Pneumonia (<em>Salmonella enterica</em> serotype typhi,</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em>)</td>
</tr>
<tr>
<td>Hematologic</td>
</tr>
<tr>
<td>Anemia</td>
</tr>
<tr>
<td>Disseminated intravascular coagulation</td>
</tr>
<tr>
<td>(usually subclinical)</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Focal abscess</td>
</tr>
<tr>
<td>Pharyngitis</td>
</tr>
<tr>
<td>Miscarriage</td>
</tr>
<tr>
<td>Relapse</td>
</tr>
<tr>
<td>Chronic carriage</td>
</tr>
</tbody>
</table>
Hôpital Baptiste Biblique  
Togo, West Africa  
Typhoid Statistics  
January through October 2003

<table>
<thead>
<tr>
<th>Month In 2003</th>
<th># Typhoid Diagnoses</th>
<th># Patients with Typhoid Perforations</th>
<th># Deaths Attributed to Typhoid/ Septicemia Secondary to Probable Typhoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>42 + 2 probable</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>February</td>
<td>17 + 3 probable</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>March</td>
<td>19 + 1 probable</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>April</td>
<td>14</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>bMay</td>
<td>12</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>June</td>
<td>13</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>July</td>
<td>14</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>August</td>
<td>11</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>September</td>
<td>15</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>October</td>
<td>28</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>TOTALS</td>
<td>191</td>
<td>112</td>
<td>18</td>
</tr>
</tbody>
</table>
So What Do I Do Now?

- "Wherefore I put thee in remembrance that thou stir up the gift of God, with is in thee by the putting on of my hands."

  2 Timothy 1:6
QUESTIONS?