resection of the rib is mentioned. Trephining has the same prominent place assigned to it as in the Greek surgery. The resources of contemporary surgery may be estimated by the fact that subcutaneous urethrotomy was practised when the urethra was blocked by a calculus. Amputation of an extremity is described in detail for the first time in surgical literature. Mention is made of a variety of ophthalmic operations, which were done by specialists after the Alexandrian fashion.

Galen’s practice of surgery was mostly in the early part of his career (born 131 a.d.), and there is little of special surgical interest in his writings, great as their importance is for anatomy, physiology, and the general doctrines of disease. Among the operations credited to him are resec­tion of a portion of the sternum for caries and ligature of the temporal artery. It may be assumed that surgical practice was in a flourishing condition all through the period of the empire from the accounts preserved by Oribasius of the great surgeons Antyllus, Leonides, Rufus, and Heliodorus. Antyllus (300) is claimed by Häser as one of the greatest of the world’s surgeons; he had an operation for aneurism (tying the artery above and below the sac, and evacuating its contents), for cataract, for the cure of stammering; and he treated contractures by something like tenotomy. Rufus and Heliodorus are said to have practised torsion for the arrest of hæmorrhage ; but in later periods both that and the ligature appear to have given way to the actual cautery. Häser speaks of the operation for scrotal hernia attributed to Heliodorus as “a brilliant example of the surgical skill during the empire.” The same surgeon treated stricture of the urethra by internal section. Both Leonides and Antyllus removed glandular swellings of the neck *(strumae)* ; the latter ligatured vessels before cutting them, and gives directions for avoiding the carotid artery and jugular vein. The well-known operation of Antyllus for aneurism has been mentioned before. Flap- amputations were practised by Leonides and Heliodorus. But perhaps the most striking illustration of the advanced surgery of the period is the freedom with which bones were resected, including the long bones, the lower jaw, and the upper jaw.

Whatever progress or decadence surgery may have ex­perienced during the next three centuries is summed up in the authoritative treatise of Paulus of Ægina (650). Of his seven books the sixth is entirely devoted to operative surgery, and the fourth is largely occupied with surgical diseases. The importance of Paulus for surgical history during several centuries on each side of his own period will appear from the following remarks of Francis Adams in his translation and commentary (vol. ii. p. 247).

“ This book (bk. vi.) contains the most complete system of opera­tive surgery which has come down to us from ancient times. . . . Haly Abbas in the 9th book of his *Prαctica* copies almost everything from Paulus. Albucasis [Abulcasis] gives more original matter on surgery than any other Arabian author, and yet, as will be seen from our commentary, he is indebted for whole chapters to Paulus. In the *Continens* of Phases, that precious repository of ancient opinions on medical subjects, if there be any surgical information not to be found in our author it is mostly derived from Antyllus and Archigenes. As to the other authorities, although we will occasionally have to explain their opinions upon particular subjects, no one has treated of surgery in a systematical manner ; for even Avicenna, who treats so fully of everything else connected with medicine, is defective in his accounts of surgical operations ; and the descriptions which he does give of them are almost all borrowed from our author. The accounts of fractures and dislocations given by Hippocrates and his commentator Galen may be pronounced almost complete ; but the information which they supply upon most other surgical subjects is scanty.”

It is obviously impossible in a brief space to convey any notion of the comprehensiveness of the surgery of Paulus ; his sixth book, with the peculiarly valuable commentary of Adams, brings the whole surgery of the ancient world to a

focus ; and it should be referred to at first hand. Paulus himself is credited with the principle of local depletion as against general, with the lateral operation for stone instead of the mesial and with understanding the merits of a free external incision and a limited internal, with the diagnosis of aneurism by anastomosis, with an operation for aneurism like that of Antyllus, with amputation of the cancerous breast by crucial incision, and with the treatment of fractured patella.

The Arabians have hardly any greater merit in medicine than that of preserving intact the bequest of the ancient world. To surgery in particular their services are small, —first, because their religion proscribed the practice of anatomy, and secondly, because it was a characteristic of their race to accept with equanimity the sufferings that fell to them, and to decline the means of alleviation. The great names of the Arabian school, Avicenna and Averroes, are altogether unimportant for surgery. Their one distinctively surgical writer was Abulcasim (d. 1122), who is chiefly celebrated for his free use of the actual cautery and of caustics. He showed a good deal of char­acter in declining to operate on goitre, in resorting to tracheotomy but sparingly, in refusing to meddle with cancer, and in evacuating large abscesses by degrees.

For the five hundred years following the work of Paulus of Ægina there is nothing to record but the names of a few practitioners at the court and of imitators or compilers. Meanwhile in western Europe (apart from the Saracen civilization) a medical school had gradually grown up at Salerno, which in the 10th century had already become famous. From it issued the *Regimen Salernitanum,* a work used by the laity for several centuries, and the *Com­pendium Salernitanum,* which circulated among the profes­sion. The serious decline of the school dates from the founding of a university at Naples in 1224. In its best period princes and nobles resorted to it for treatment from all parts of Europe. The hôtel dieu of Lyons had been founded in 560, and that of Paris a century later. The school of Montpellier was founded in 1025, and became the rallying point of Arabian and Jewish learning. A good deal of the medical and surgical practice was in the hands of the religious orders, particularly of the Benedic­tines. The practice of surgery by the clergy was at length forbidden by the council of Tours (1163). The surgical writings of the time were mere reproductions of the classi­cal or Arabian authors: “unus non dicit nisi quod alter.” One of the first to go back to independent observation and reflexion was William of Saliceto, who belonged to the school of Bologna; his work (1275) advocates the use of the knife in many cases where the actual cautery was used by ancient prescription. A greater name in the his­tory of mediæval surgery is that of his pupil Lanfranchi of Milan, who migrated (owing to political troubles) first to Lyons and then to Paris. He distinguished between arterial and venous hæmorrhage, and is said to have used the ligature for the former. Contemporary with him in France was Henri de Mondeville of the school of Mont­pellier, whose teaching is best known through that of his more famous pupil Guy de Chauliac; the *Chirurgie* of the latter bears the date of 1363, and marks the advance in precision which the revival of anatomy by Mondino had made possible. Eighteen years before Lanfranchi came to Paris a college of surgeons was founded there (1279) by Pitard, who had accompanied St Louis to Palestine as his surgeon. The college was under the protection of St Cosmas and St Damianus, two practitioners of medicine who suffered martyrdom in the reign of Diocletian, and it became known as the Collége de St Come. From the time that Lanfranchi joined it it attracted many pupils. It maintained its independent existence for several centuries,