

and methods, these three cases and two others recorded as septic, making five in all, might possibly have recovered. This would leave of the cases where the cause of death is, according to our present knowledge, one against which we are unable to guard, eleven deaths from hemorrhage, eight from shock, one from peritonitis, in all 20. There are 14 fatal cases in which *no cause of death* is given. According to this table, it will be seen that the percentage of deaths from *hemorrhage* alone is 55% of those operated on for hypertrophic or leucocythæmic spleen tumors, or 36% in leucocythæmic cases, and 63% in hypertrophic cases, and in these cases I consider every care was taken to prevent bleeding. If we now look at the cases said to be simple hypertrophic tumours successfully removed, we find four; two of these have no further particulars, and of the other two, both were malarial enlargement, but one of these died 27 days after from acute nephritis. This ought to be considered as a possible danger subsequent to the removal of the spleen, and I think in considering the advisability of operation, should rank as a fatal case. However, it will be readily seen without this, that hemorrhage is accountable for 27% more deaths where leucocythæmia is not present than where it is present, and we have an almost equal number of cases (as 21:22) to bring us to this conclusion. I cannot help believing, therefore, that the old idea that the excessive tendency to hemorrhage, after removal of large tumours of the spleen, is due to the leucocythæmic condition of the blood, is in part erroneous, and that we must seek for some other explanation.

I will, therefore, give my rendering of the German of Dr. Asch on this point: "One case of Tranzolini, which was undoubtedly leucocythæmic, recovered. This is the only recovery recorded; but yet it proves that even though the patients suffer from leucocythæmia, they may still recover from the operation.

"The hemorrhagic diathesis of leukæmic women cannot be so absolutely determined in every case as to exclude operation. Why do notoriously leukæmic women pass safely

through their confinement even without noteworthy bleeding? Why does not an uncontrollable hemorrhage set in in the beginning of the operation in these leukæmic cases?" (Trans.—It does. Mr. Bennett May has just told me of a case on which he operated when all attempts to stop the hemorrhage from the abdominal wall and other parts proved unavailing).

"The blood of my patient, and of other patients who have died from hemorrhage, showed sufficient clotting power. Why have 17 out of 21 cases operated on for hypertrophic spleen, where no leucocythæmia was present, died, *i.e.*, 81%? The majority of these have died from hemorrhage, as well as those in which leucocythæmia was present.

. . . The hemorrhage came on at the time when the blood pressure was increased, namely, after the effects of the anæsthetic had passed off.

"It appears to me that what is regarded usually as the normal blood pressure breaks through the opposition offered by the freshly-formed thrombi, and that the blood escapes from the smallest cut or torn vessels. . . .

"Physiology has most certainly proved that after the ligation of a vessel the intravascular blood pressure is increased for a time, but then falls again to normal. This would appear to equally apply in those cases in which a very large capillary tract is suddenly shut off from the rest of the blood current, as happens in operations where very large tumours of the spleen, whether leukæmic or simply hypertrophic, are removed.

"Tranzolini, whose successfully removed spleen tumors were not as large as those removed unsuccessfully, now operates immediately after the onset of leukæmic symptoms, and comes to the conclusion that it is not the leukæmia that contra-indicates operative interference, but that it is the very large size of the tumors. . . .

"A careful selection of cases would, perhaps, give the operation an increased popularity, and I wish now to alter the usually-accepted maxim from 'Never do a