



CHAPTER I

BACKGROUND AND RATIONALE

Knee arthritis is a commonest problems in Thailand and total knee arthroplasty(TKA) has proven, during the past 25 years, to be an enormously successful therapeutic intervention for destructive process within the knee. Knee replacement has been so successful that it has exceeded all initial expectations by leaps and bounds, and has led to an expansion of the indications of knee replacement into younger patients and in patient with abnormal anatomy. The TKA is associated with a significant blood loss. A study in 1991 by Luke et al.(1) concluded that the mean blood loss in TKA when calculated from the perioperative drop in hemoglobin is 1518 ml. which is composed of visible blood loss from the surgical field , wound drainage and blood loss into the soft tissue.

Drains have been used by many surgeons after TKA with the expectation that a postoperative hematoma will be prevented, or less transfusion need.(2) A hematoma may increase wound tension and reducing tissue perfusion. In addition, a hematoma is an excellent culture medium for infection.It is logical to assume that if a drain tube could prevent this hematoma, it could diminish postoperative complication, especially infection and poor motion.(3)

The rigid splint , A-P splint, which made from Plaster of Paris and molding along the anterior and posterior of leg from mid thigh to the foot may logically inhibit knee movement that produce bleeding from surgical trauma and subsequently reduce blood transfusion.