The labeling pattern of non poly(A) associated (poly(A)^-) RNA of rabbit cerebral cortex was studied 24 hr after a single electroconvulsive shock (ECS). The animals were injected subarachnoidally with [3H]uridine and sacrificed 1 hr later. The fractionation pattern of labeled nuclear poly(A)^- RNA in the cerebral cortex of ECS treated animals was identical to that of the controls. However, microsomal poly(A)^- RNA from the treated animals showed an increased labeling of 18S ribosomal RNA. Also 28S RNA displayed a higher labeling but the effect was not statistically significant. These results indicate a more efficient production of ribosomal RNA in the late post-ECS period which might be in relationship with an increased activity of brain protein synthesis machinery.

INTRODUCTION

A single electroconvulsive shock (ECS) has been shown to exert remarkable effects on brain RNA metabolism. In particular, we found a displacement towards the high molecular weights in the fractionation pattern of poly(A)^+ RNA newly synthesized in the rabbit cerebral cortex immediately after a single ECS (1). Such an effect appeared to be still
Fig. 1. Patterns of fractionation of newly synthesized nuclear poly(A)^+ RNA in the cerebral cortex of control rabbits (A) and of rabbits injected 24 hours after a single ECS (B). In both cases [3H] uridine was injected subarachnoidally and the animals killed 1 hr later. Poly(A)^+ RNA was run on 0.7% agarose-1.7% polyacrylamide gels for 50 minutes under 5 mA/gel.