

Outcome and presurgical resources in epilepsy surgery on children with IQ/DQ above and below 70.

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Purpose: Epilepsy surgery on mentally retarded children is expected to have a poor outcome. We studied if this was true and if resources used for evaluation differed between children with IQ/DQ ≥ 70 (group A) and IQ/DQ < 70 (group B).

Methods: In a retrospective study the Danish children with epilepsy (n = 38) operated between 1996 and 2004 were evaluated. The description of the material is seen in **table 1**.

The outcome concerning seizures and the neuropsychological evaluation were assessed 1 year after surgery. Only temporal lobe resections not requiring intracranial registration were performed in Denmark in this period. All patients had a full evaluation except for intracranial registration, either before operation in Denmark or referral for operation abroad.

The calculations of presurgical resources used have been done only for evaluation performed in Denmark in this study.

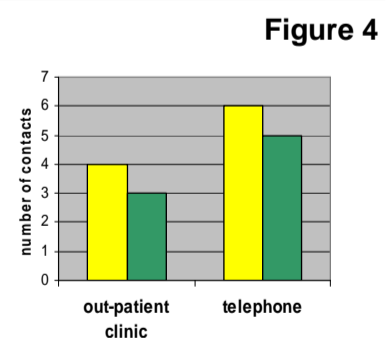
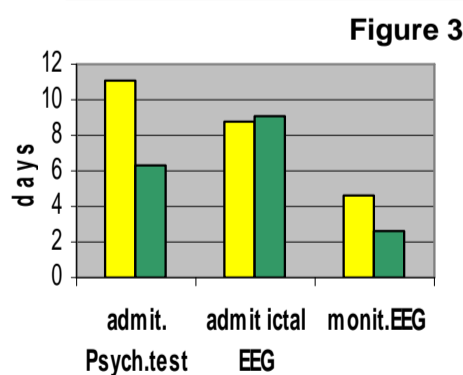
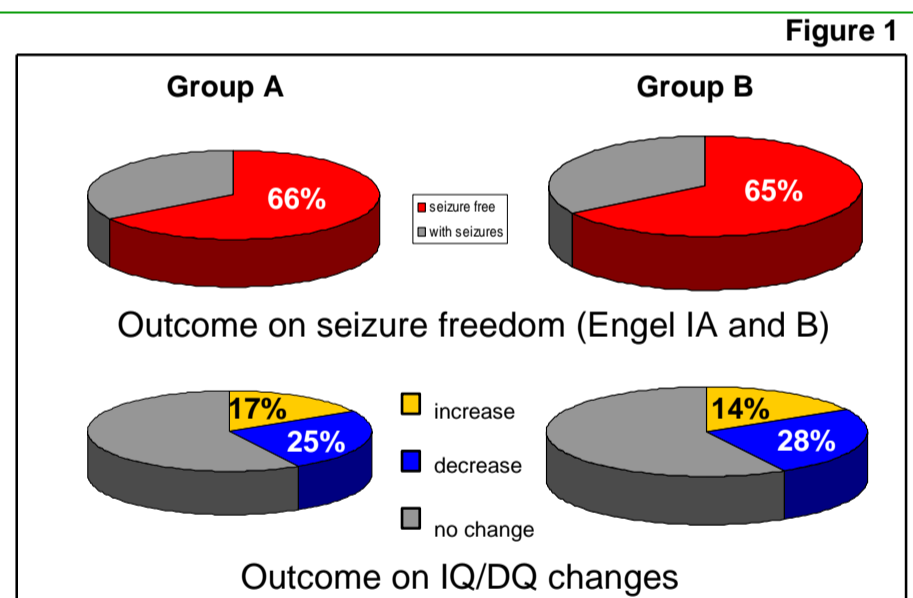
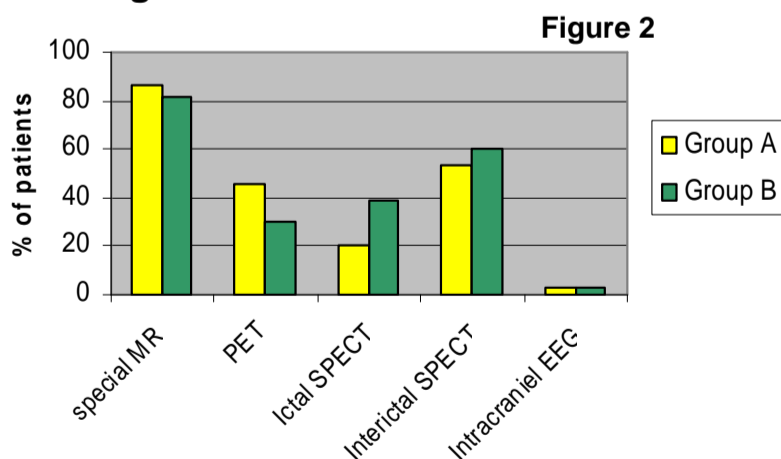
Table 1

Material		A IQ/DQ ≥ 70	B IQ/DQ < 70
N =		15	23
Place of operation	Denmark/ Abroad	9/6	5/18
Resection	Hemispherectomi/multilobe	3	14
Aetiology	Cortical dysplasia	4	9
	Tumours	4	4
	Others	7	10
Mean duration of epilepsy	(years;months)	7 y ; 1 m	5 y ; 7 m
Mean age at operation	years;months)	13 y ; 1 m	8 y ; 1 m

Results: Seizure free outcome was found in 66% (group A) and 65% (group B) at one year follow up. In group A 25% had a decrease and 17% an increase of ≥ 10 IQ/DQ compared to 28% and 14% in group B (Figure 1).

Presurgical resources used on different imaging modalities and intracranial EEG can be seen in figure 2. Resources used for admittance and outpatient contacts are shown in figure 3 and figure 4.

Presurgical resources



Conclusion: Seizure and developmental outcome after epilepsy surgery were the same in children with IQ/DQ above and below 70. Furthermore, the presurgical resources used in the two groups were comparable. In carefully selected children with mental retardation epilepsy surgery should be an option as well as it is for normally developed children.