

Methods for Grouping of Foetal Observations

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Use of Classification Systems in Study Reports

Advantages

- Severe, adverse changes are grouped together
- Minor, non-adverse changes do not distract from viewing major ones
- Same type of tabulation for different test substances

Grouping by Examination and Classification Categories

- Separate tables for external, visceral and skeletal changes
- Separate tables for malformations and variations

Use of Classification Systems in Study Reports

Two main problems for reviewers

- Data become dispersed into different tables and the context that exists in the foetus is lost in the report
- Presence of malformations can prevent reporting (or recording?) of more subtle changes

Selected Changes

mg/kg bw/d	0	10	20	35
Litters (Foetuses)	14 (113)	15 (117)	16 (139)	15 (126)
Major vessel var.	1 (1)	8 (9)	3 (5)	5 (7)
Cardiovascular malf.	0	4 (7)	0	1 (3)
Gall bladder agenesis	0	1 (1)	2 (3)	1 (1)
Head dome-shaped	0	0	1 (1)	4 (10)
Acrania	0	0	1 (1)	4 (9)
Hydrocephalus intern.	0	0	0	2 (3)
Cleft palate	0	0	0	3 (5)
Tongue small	0	0	0	3 (6)
Limbs shortened	0	0	0	3 (6)
Limbs flexed	0	0	0	3 (7)
Scoliosis	0	0	0	2 (3)
Total affected	1 (1)	11 (16)	5 (9)	8 (22)

Two Malformation Complexes

mg/kg bw/d	0	10	20	35
<i>Cardiovascular</i>				
Major vessel var.	1 (1)	8 (9)	3 (5)	5 (7)
Cardiovascular malf.	0	4 (7)	0	1 (3)
Litters (Foetuses)	1 (1)	11 (15)	3 (5)	5 (10)
<i>Craniofacial/Limb/Spine</i>				
Head dome-shaped	0	0	1 (1)	4 (10)
Acrania or hydrocephalus	0	0	1 (1)	4 (12)
CP and/or small tongue	0	0	0	3 (6)
Limb defects	0	0	0	3 (7)
Scoliosis	0	0	0	2 (3)
Litters (Foetuses)	0	0	1 (1)	4 (13)
Foetuses with >2 components	0	0	0	6

MGI Data

Affected Systems	hm1	hm2	hm3	cx4	cx5	cx6	cx7	cx8	cx9	cx10	cx11	cx12
craniofacial	√		√		√		√	√				
craniofacial phenotype	N											
abnormal neurocranium morphology	√						√					
small frontal bone	√											
absent interparietal bone	√											
abnormal supraoccipital bone morphology	√											
abnormal alisphenoid bone morphology	√											
absent presphenoid bone	√											
abnormal squamosal bone morphology	√											
small temporal bone	√											
short mandible	√						√	√				
short maxilla	√											
short zygomatic bone	√											
acrania	√		√									
abnormal facial morphology			√									
cleft palate							√					
midline facial cleft					√		√	√				
shortened head			√									
growth/size					√		√					
limbs/digits/tail					√		√					
polydactyly					√		√					
short tibia					√		√					
mortality/aging	√		√									

Thank you for listening

and

**for paying attention
to variations**