

HACEK bakteriæmi i Danmark

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- Lidt om HACEK
- Danish HACEK Study Group
- Vores resultater

Haemophilus species (*excl. H. influenzae*)

Aggregatibacter species

Cardiobacterium species

Eikenella corrodens

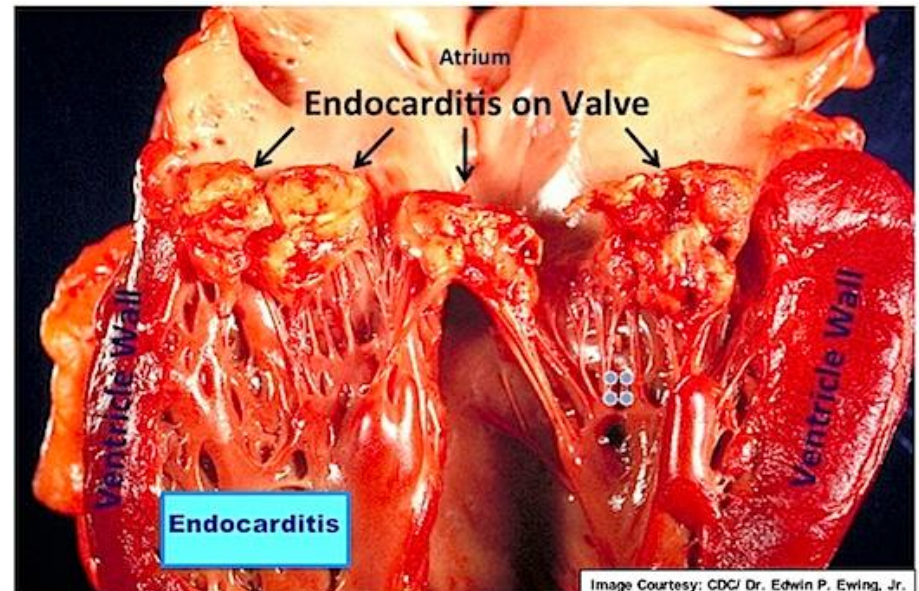
Kingella species

- Heterogen gruppe af kræsnere, Gram-negative stave
- Koloniserer mundhule/svælg
- Inficerer periodontalt væv, cerebrum, lunger, abdomen, knogler, led og bløddele

- De kan alle give endokardit

- Udgør 1,4-3% af IE

1,2% i endnu ikke publiceret dansk studie



- Kun få studier med udgangspunkt i HACEK bakterieæmi
- Yew et al. (2015):
 - 87 ptt, 5 NZ KMA'er, 1979-2011
 - Aggregatibacter spp. hyppigst
 - Median alder 45 år
 - 2/3 mænd
 - 60% med IE (0-100% afhængig af species)

- MiBa
- Klinisk Mikrobiologiske Afdelingers databaser
- Frosne stammer

- Øvrige registre (CPR, LPR mfl.)

Danish HACEK Study Group

- Repræsentant fra hver KMA og SSI

Formål

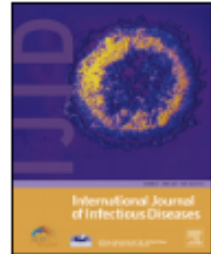
- National epidemiologi for HACEK bakteræmi
 - Association med endokardit
 - Karakterisering af stammer
-
- Etablering af fælles national stammesamling til brug for yderligere projekter

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Incidence of HACEK bacteraemia in Denmark: A 6-year population-based study

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HACEK bakteriæmi i DK 2010-2015

- Baseret på udtræk fra MiBa
- BD med HACEK, <1 mdr
- 2010-2015

- 147 "incident" cases
- Incidens 0,44/100.000 person-år
 - 2 dobbeltinfektioner: *A.aphrophilus*+*E.corrodens*
A.segnis+*H.parainfluenzae*

- I alt 149 isolater
 - 1 pt. med *E.corrodens* x 2
 - 1 pt. med *C.hominis* x 3

Table 1
Characteristics of 149 HACEK blood culture isolates.

Microorganism	Number of cases (%)	Incidence ^a	Median age in years (range)	% male
<i>Haemophilus spp</i>	55 (37)	0.16	55 (0.0–97)	64
<i>H. parainfluenzae</i>	48 (32)	0.14	54 (2–90)	65
<i>H. parahaemolyticus</i>	4 (3)	0.01	47 (0.0–69)	100
<i>Haemophilus spp</i> not specified	3 (2)		72 (0.1–97)	0
<i>Aggregatibacter spp</i>	37 (25)	0.11	69 (18–96)	73
<i>A. actinomycetemcomitans</i>	18 (12)	0.05	71 (27–96)	72
<i>A. aphrophilus</i>	12 (8)	0.04	68 (18–86)	67
<i>A. segnis</i>	6 (4)	0.02	48 (24–63)	83
<i>Aggregatibacter spp</i> not specified	1 (1)		69	100
<i>Cardiobacterium spp</i>	9 (6)	0.03	62 (24–79)	78
<i>C. hominis</i>	8 (5)	0.02	59 (24–79)	75
<i>Cardiobacterium spp</i> not specified	1 (1)		72	100
<i>Eikenella spp</i>	21 (14)	0.06	62 (2–89)	57
<i>E. corrodens</i>	20 (13)	0.06	61 (2–89)	60
<i>Eikenella spp</i> not specified	1 (1)		69	0
<i>Kingella spp</i>	27 (18)	0.08	1 (0.5–68)	52
<i>K. kingae</i>	26 (17)	0.08	1 (0.5–68)	50
<i>K. denitrificans</i>	1 (1)	0.003	1	100
Total	149	0.44	56 (0.0–97)	64

^a Per 100 000 person-years.

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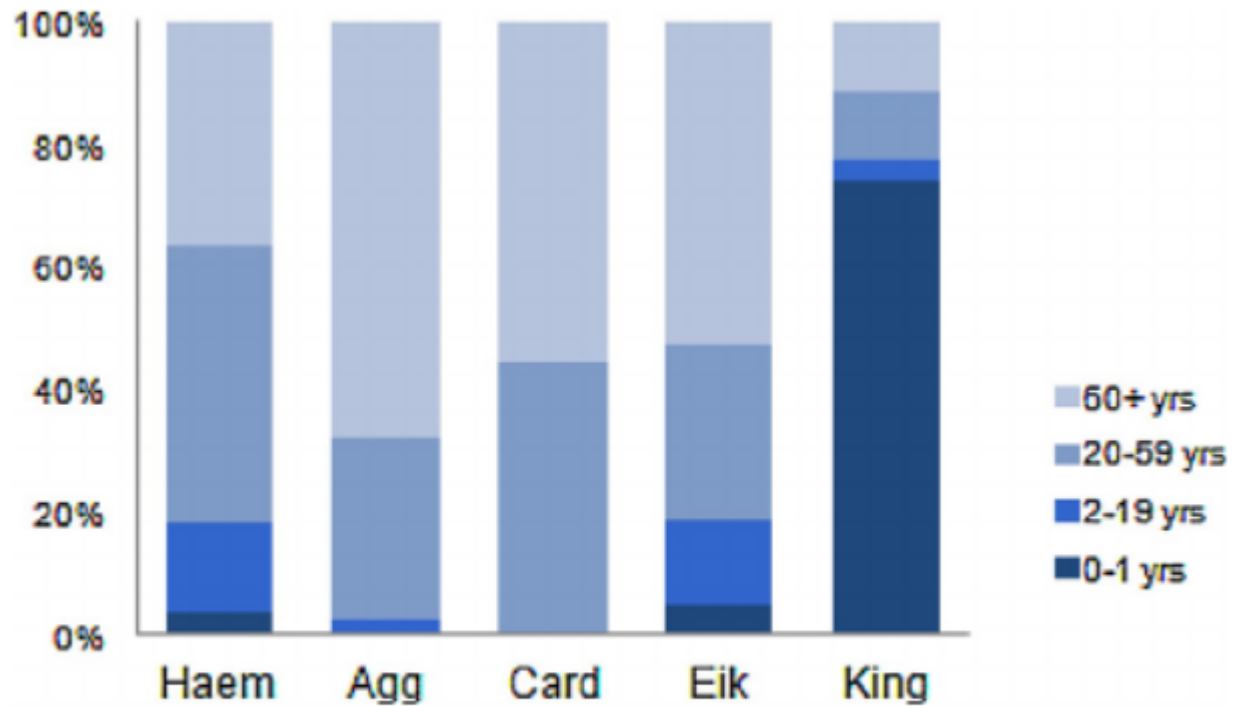


Figure 2. Agedistribution for 149 blood culture isolates obtained from 147 incident cases of HACEK bacteraemia, according to bacterial genus: *Haemophilus* (Haem), *Aggregatibacter* (Agg), *Cardiobacterium* (Card), *Eikenella* (Eik), and *Kingella* (King).

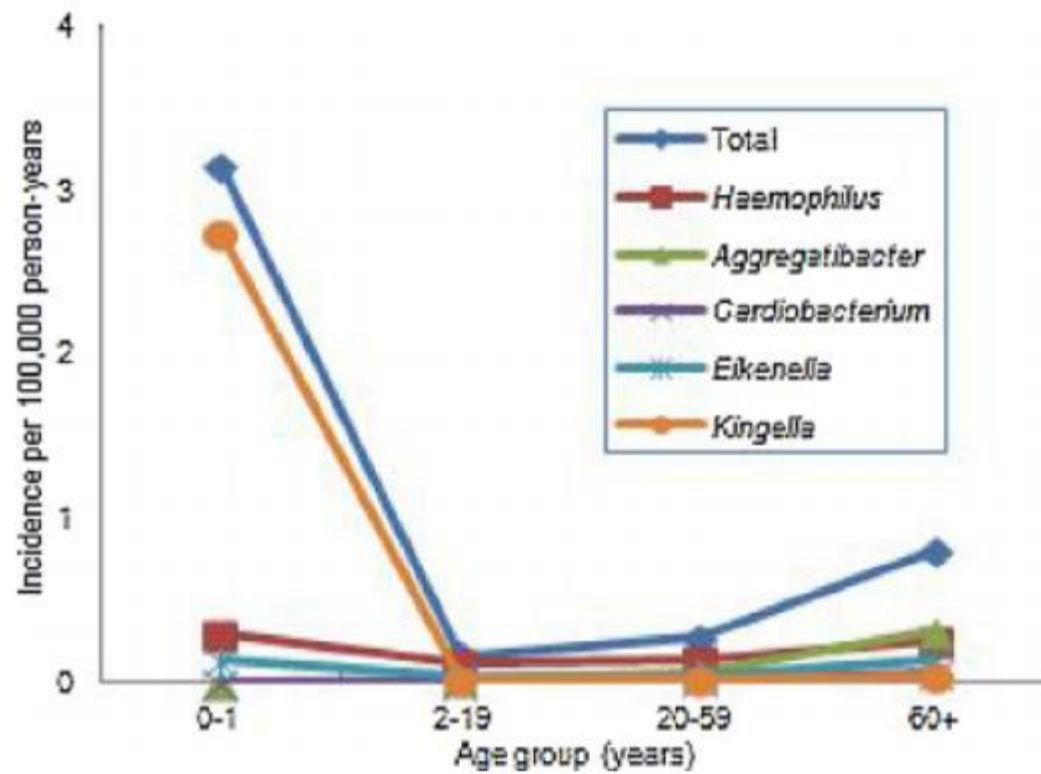


Figure 1. Age and genus-specific incidence of HACEK bacteraemia in Denmark, 2010–2015.

HACEK IE i DK 2010-2015

	Bacteraemia			IE		
	Number	Median age	% male	Number (% bacteraemia)	Median age	% male
<i>Haemophilus</i>	50	54	65	9 (18)	57	89
<i>Aggregatibacter</i>	30	69	72	9 (30)	74	56
<i>Cardiobacterium</i>	8	68	71	5 (63)	56	80
<i>Eikenella</i>	20	63	60	0 (0)	-	-
<i>Kingella</i>	22	1	41	2 (9)	(37/68)	50
Total	130		62	25 (19)		72

Konklusion

- *Haemophilus* species hyppigste agens ved HACEK bakteræmi i DK
- Hyppigst mænd
- Høj incidens før 2-årsalderen og senere igen stigende
- Heterogen alders- og kønsfordeling imellem de enkelte HACEK genera
- Stor andel med IE, men meget afhængigt af species

Fremtidige projekter

*Association mellem HACEK bakteræmi og IE i DK
2010-2017 (2018)*

Opdatering af stammesamling (2015-nu)

H. sputorum – klinisk betydning, WGS

Tak 😊