

Ovarian response and general ageing?

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Many studies demonstrate that earlier menopause is associated with increased risk of cardiovascular disease (CVD): often assumed to be a result of a protracted ageing process. Predictors of earlier menopause include signs of limited ovarian reserve, e.g. low antral follicle count and low anti-Mullerian hormone levels, and have been associated with CVD. Given the close relationship between these ovarian reserve parameters and ovarian response, is it not a surprise that Christensen *et al.* (2020) found an association between oocyte yield during assisted reproduction and an increased risk of CVD in their valuable large Danish data collection. They further aimed to find out if additional ageing-related disorders were associated with poor ovarian response. Only osteoporosis surfaced as significantly associated with poor ovarian response. Therefore, obvious general advanced ageing was not evident yet. This could be due to the relatively short follow-up period

(median of 8 years), implying more clarity could come with future repeated follow-up. Alternatively, their study may point to a dominance of oestrogenic deprivation, for which osteoporosis is a paramount indicator, as a cause for the increase in CVD that was not associated with general ageing.

Reference

Christensen MW, Kesmodel US, Christensen K, Kirkegaard K, Ingerslev HJ. Early ovarian ageing: is a low number of oocytes harvested in young women associated with an earlier and increased risk of age-related diseases? *Hum Reprod* 2020;35: deaa188.