



# 'Where there is no wine there is no love': Euripides. Greek Playwright. 480–406 BC

Is there a link between fertility and wine consumption? Maybe!

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When counselling patients about the possible complications of Haemopoietic Cell Transplantation (HCT), the one thing that really upset them was the fact that they would be infertile after transplant. This was particularly true with female patients. A number of issues will influence the possibility of infertility including the number of chemotherapeutic agents to which the patient is exposed and the age of the transplant recipient [1]. Patients over the age of 35 years are more likely to have problems. Women under the age of 40 would probably opt for an IVF cycle (Fig. 1). Hyperstimulation is a different thing. Multiple eggs are collected and embryos are created. Egg freezing had its teething problems but now most eggs can be thawed safely after vitrified fractionation.

Of course, there are many psychological, religious and cultural issues to be taken into account in such discussions. The diagnosis of a haematological malignancy often makes such discussions even more difficult. There is also the issue of male infertility. Not much attention is paid to this problem. Sperm preservation is now a well-established technique but the situation remains problematical for pre-pubertal boys. If you are an HCT doctor without much expertise in this area you should refer your patient to someone who does, as quickly as possible. At a time when the outcome for patients undergoing HCT is improving the topic of fertility is becoming even more important than heretofore.

Does wine consumption influence the chances of becoming pregnant or the outcome of pregnancy? There are differences in opinion about the influence of wine consumption on fertility. My comments about wine drinking

during pregnancy are not meant to endorse alcohol consumption but simply to point out the confusing literature on the subject.

Since the documentation of the foetal alcohol syndrome (FAS) by Jones and Smith in 1973 [2], women who consume a very moderate amount of wine e.g. a glass of wine with their evening meal, have become pariahs. There is no doubt that the FAS exists and causes devastating toxicities to infants including irreversible brain damage and growth retardation. Alcohol is now classified by the WHO as a carcinogen! However, the deleterious effects of alcohol on the developing foetus seem to be maximal in the first trimester and diminish thereafter. So, it is probably best for pregnant women to desist from alcohol during the first trimester of pregnancy but the evidence that moderate wine consumption (1–2 glasses of wine per week) during the second and third trimester are harmful is difficult to elicit. I have asked a number of distinguished Professors of Obstetrics and Gynaecology to provide me with the evidence that moderate wine consumption by pregnant women, who are otherwise healthy and well fed is harmful to their health or that of the foetus, but so far, I have received no satisfactory reply. Mamluk et al. [3] carried out a meta-analysis and concluded that the evidence that moderate wine consumption was harmful to foetal development was sparse but that erring on the side of caution by total abstinence was probably best.

What about the effects of wine consumption on fertility (Fig. 2)? Published results are confusing. Juhl et al. [4] found that a moderate intake of wine shortened the time to pregnancy in couples not using any form of contraception. As they say 'Whether this is an effect of wine itself or the characteristics of the wine drinker is not known'. Perhaps another explanation is that after a glass of wine they felt in the mood!

Trying to discern the effects of light wine drinking is even more difficult. One study in 2012 [5] and another large

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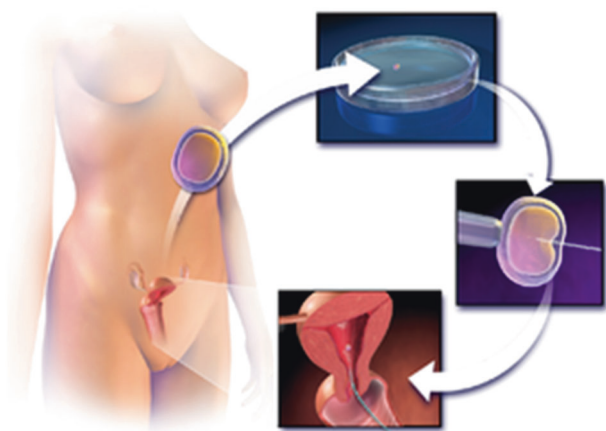


Fig. 1 IVF

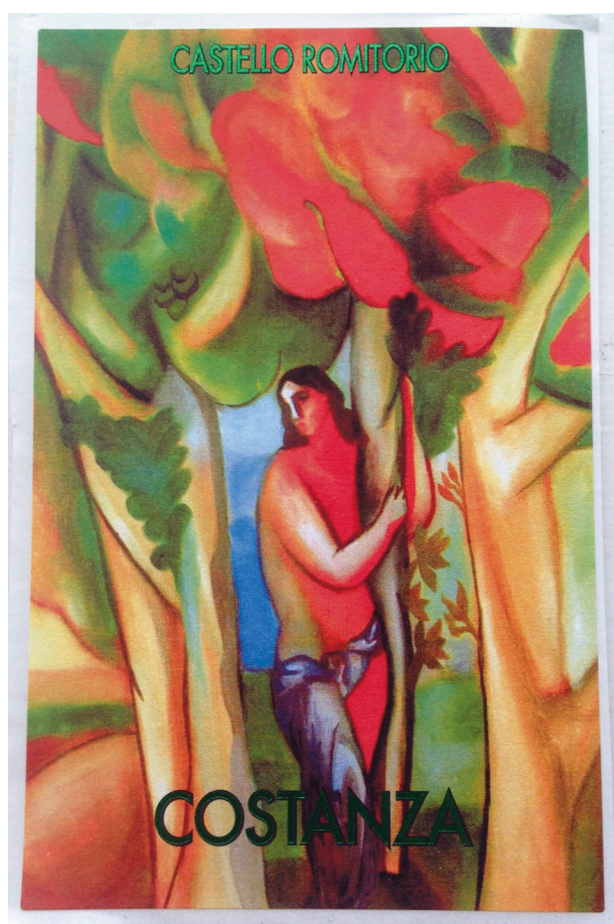


Fig. 2 A wine label from Sandro Chia, Artist and Winemaker, Tuscany, Italy

prospective study in 2013 [6] failed to demonstrate any deleterious effect on socioemotional difficulties or cognitive deficits on 5-year-old children whose mothers had engaged in light wine drinking during pregnancy. So, it looks like light wine consumption during pregnancy has no measurable deleterious effects on the baby.

However, as Antonio said in William Shakespeare's 'The Merchant of Venice': The devil can quote scripture for his purpose'. Although the data are conflicting probably the best advice to give pregnant women is to abstain from alcohol during the first trimester and if she must, then limit wine consumption to a couple of glasses per week during the second and third trimester. Some authorities e.g. The CDC in Atlanta and some national bodies recommend total abstinence from alcohol during pregnancy based on little or no evidence. Luckily, it is not a decision I will ever have to make!

### Compliance with ethical standards

**Conflict of interest** The author declares that he has no conflict of interest.

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