

# Review of the Safety of IV Iron Therapy in Patients with Chronic Kidney Disease (CKD)

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Iron therapy is important in optimal management of anaemia of CKD. There has been a significant increase in parenteral iron use in patients with CKD and dialysis. Therefore the safety in the administration of parental iron therapy is critical.

The authors reported mortality related anaphylaxis, thus raising concerns and promoting this local review.

A retrospective single-centre study review of parenteral administration of CosmoFer® and MonoFer® therapy in CKD and dialysis patients. A database of patients' demographics, quantity of iron administered, baseline haemoglobin and iron parameters was interrogated.

Several types of adverse effects may occur:

**Short term**

- Acute anaphylactic reactions
- Labile iron reactions (Fishbane effect)

**Longer term**

- Oxidative stress
- Possible increased risk of infections
- Risk of iron overload

**Details included**

- Clinical observations
- Any side effects during or after iron administration
- Follow up 48 hours later via telephone

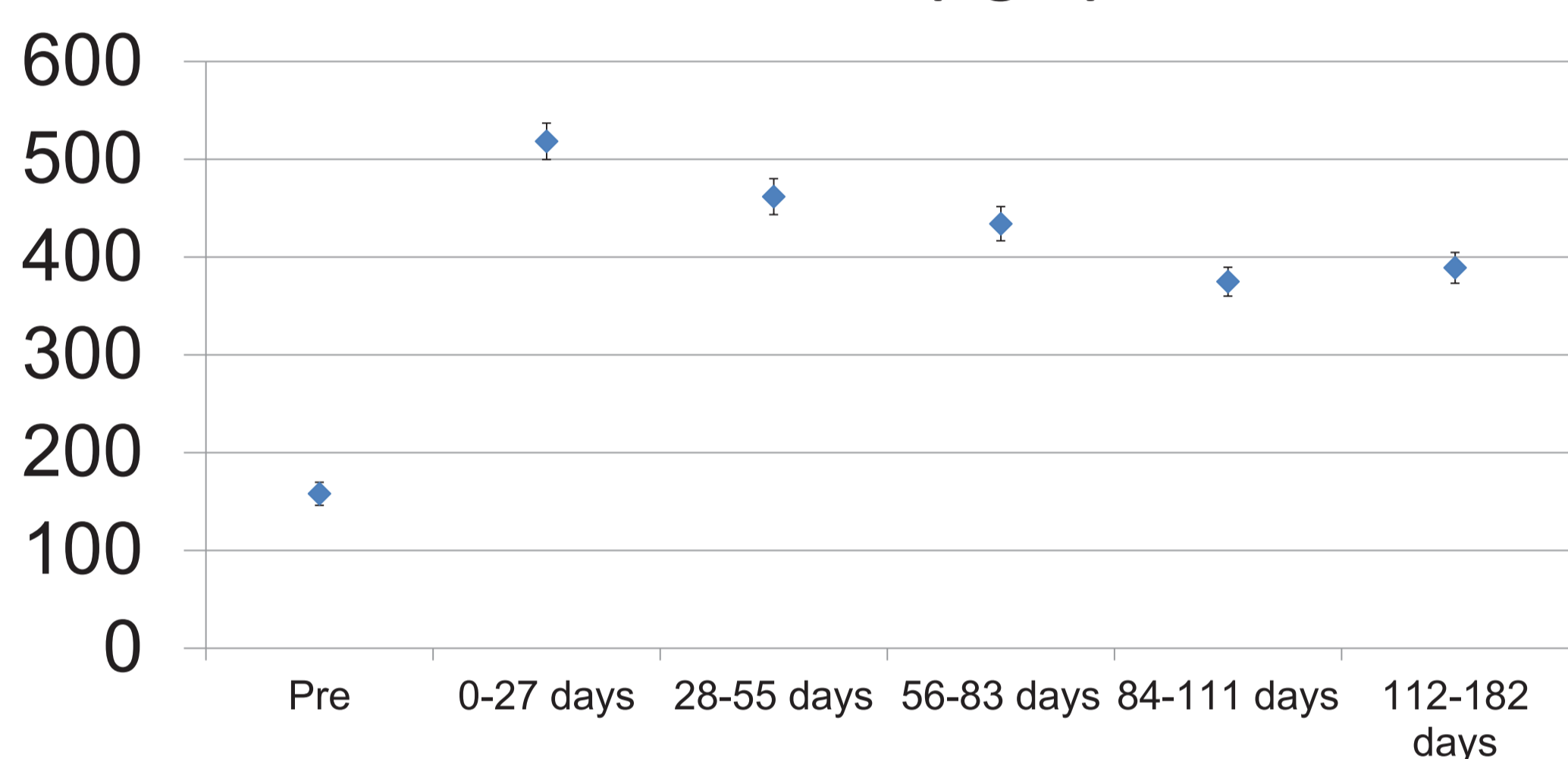
The 2014 KDIGO conference meeting has in part reviewed this in addition to a recent paper from JAMA, the latter of which highlighted a high rate of "anaphylaxis" as a result of iron administration.

## Results

A preliminary analysis of the efficacy and safety data in NDD-CKD and haemodialysis patients demonstrates:

### Efficacy

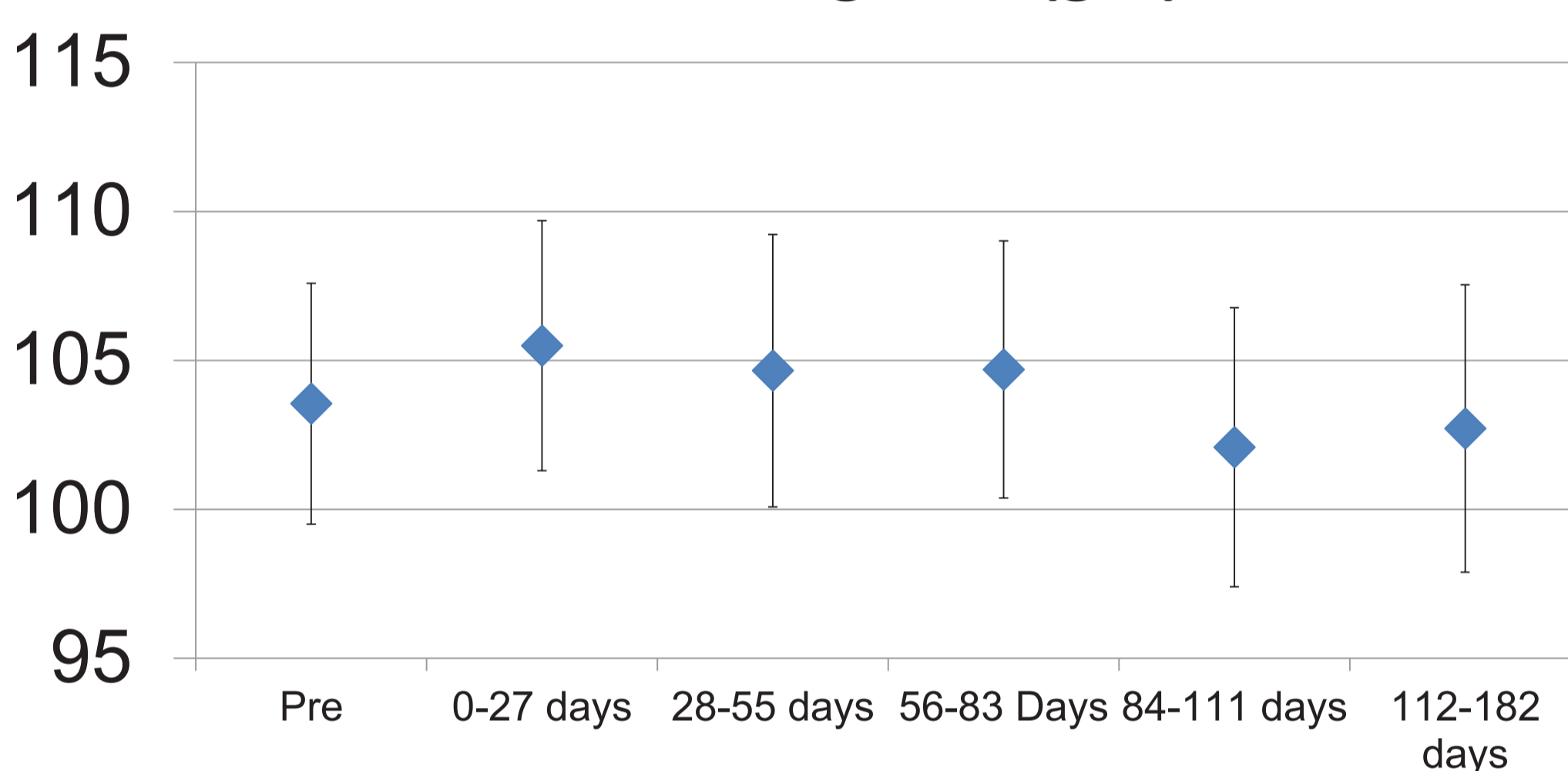
#### Mean Ferritin (ug/L)



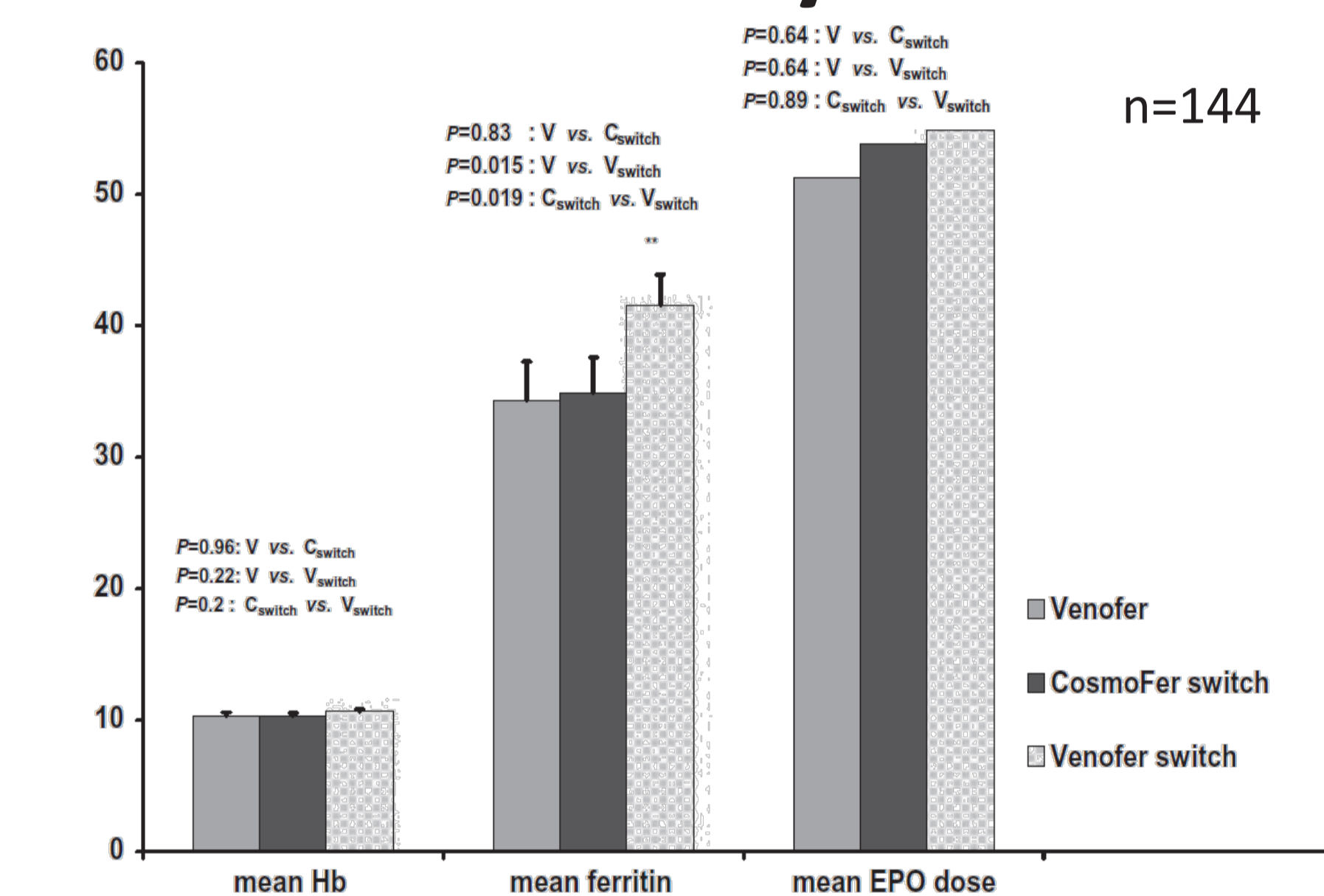
### NDD-CKD

n=825

#### Mean Haemoglobin (g/L)



### Haemodialysis



MONIEM & BHANDARI  
TOLERABILITY AND EFFICACY OF INTRAVENOUS IRON PREPARATIONS

### Safety

**1.1% mild/moderate reactions**

8 in 750 patients

Immediately post administration or within 48 hours

- Hypotension (3)
- Diarrhoea (1)
- Headaches (2)
- Vomiting (1)
- Numbness (1)
- Flushing (2)

**0.1% Severe reaction requiring medical intervention**

1 in 750 patients

Required oxygen, hydrocortisone and nebulisers. 2 previous Cosmofer infusions with no problems and had respiratory infection at the time of infusion.

**CosmoFer®**  
**98.8% no reaction**

741 of 750 pts

750-1500mg (606 NDDCKD pts)  
100mg (144 haemodialysis pts)  
Mean age 65y (age range 16-92)

**Monofer®**

**97.7% No reaction**

214 of 219 pts

1000-1500mg (219 NDDCKD pts)  
Mean age 70 y (age range 24-93)

**2.3% mild/moderate reactions**

5 in 219 doses

Immediately post administration or within 48 hours

- Eczema (1)
- Vomiting (1)
- Constipation (1)
- Lethargy (1)
- Hypersensitivity (1)

- No reaction
- Severe reaction
- Minor Reaction

### Conclusion

With only 14 reactions (0.5%) in 2513 doses and only 1 Severe reaction (0.03%) iron remains an important and safe therapeutic option for patients with CKD and patients should be reassured until new data is available. More studies are required to delineate the short and long term safety of iron therapy.