Proof. From Theorem 3.1 we have $f_k(x;\{t\}) = [\frac{f(x)}{x-t}]_k + k!\frac{f(t)}{(x-t)^2}$. So if $g(t) = f_k(x;\{t\}),$ then g has Darboux property in $[a,b]-\{x\}$. Now by Theorem 3.3 , $f_k(x;V)$ is divided difference of g at the points of V . Hence by Theorem 3.1 of [2] the result follows.

References

[1] Fejzic H, Svetic R E and Weil C E (2010) : Differentiation of n-convex functions . *Fund. Math.* 209 ,No.1 9-25 Zbl 1202.26008
[2] Mukhopadhayay S N, Ray S (2009) : Mean value Theorems for divided differences and approximate Peano derivatives. *Mathematica Bohemica* 134 No. 2, 165-171. Zbl 1212.26075