In the proof of Lemma 3.6, a reference is made to the thesis of N. Oudjane (p. 66). To apply this result directly, one needs that the measure λ we use is a probability measure on $C_k(\Delta)$. This is not the case as we took λ to be the Lebesgue measure. There are two remedies.

1. The best way would be to rewrite everything, this time with taking not dx' in the second line of (3), but a probability measure. The second line of (3) can be replaced by $\Psi_{k+1}^{\Delta}(x')Q(x_0, dx')$ for some arbitrary x_k in $C_k(\Delta)$. The whole computation will run in the same way (with modified ξ_1, ξ_2 which will even be simpler than in the present form of the paper).

2. One can also point a minimal transformation : the $C_k(\Delta)$'s are of finite diameter ($\leq b_0 + 2b_1\Delta$ by (H2)) so if we rewrite carefully the proof of Lemma 3.6, we will end with $\alpha(\Delta)(1 + (b_0 + 2b_1\Delta)^d) \times$ (some constant) instead of $\alpha(\Delta)$, which is not as good as before but should all the same go to 0 as $\Delta \to +\infty$.