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PROSTATIC CANCER AND HUMAN PAPILLOMAVIRUS (HPV): AUTO-IMMUNE THROMBOCYTOPENIA INDUCED BY GARDASIL AND CERVARIX VACCINE HPV L1 MIMICKING PLATELET GPV

Présentation

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TRAN Guy Mong Ky

Retired, Public Health (Agence Régionale de Santé ARS Auvergne Rhône Alpes), Hospital Hôtel-Dieu, Clermont-Ferrand, FRANCE. Correspondence: 31 Avenue du Bois 92290 Chatenay Malabry. E-mail: mkg_tran@yahoo.fr

Phone:
+33 9 81 89 38 70.

BACKROUND Among the auto-immune complications occurring after anti-HPV vaccination (Gardasil and Cervarix), was reported thrombocytopenia (*Pugnet G, 2009*). Odds Ratio (OR) for Serious Autoimmune Adverse Events (SAAEs) reported by the
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ystem (VAERS) from Jan 2006 through Dec 2012 is OR=1,3 (95% CI=0.48-3.5) (
Geier DA, 2015
) for thrombocytopenia. If severe, this thrombocytopenia can conduct to cerebral hemorrhage

and eventually death.

METHODS Amino acid sequences comparison between HPV L1 and platelet gpV. We centered the alignment on the FP and related LP motifs (Leucine L replaces Proline P). Platelet alloantigen, P1T, on glycoprotein V is associated with neonatal alloimmune thrombocytopenia (*Ertem M, 1994*). Measles was investigated versus platelet gpIIbIIIa on the FP motif.

RESULTS Platelet gpV was aligned with HPV (types -16,-18, -6, -11,-31,-33,-52,-58) L1 of Gardasil 9.

perfect molecular mimicry ALPDG was found between HPV-61,-72,-81 L1 and platelet gpV.

A common motif LPDT was found between rubella virus nsp and HPV-18 L1. Rubella can induce thrombocytopenia (*Okazaki N, 2011*). There is a common motif ALPD between gpV, HPV-11 and HPV-6 L1. Anti-gpV specific antibodies are also particularly evident in Varicella virus thrombopenia (*Mayer JL, 1996*) and are cross-reactive with platelet (*Wright JF,1994*): Varicella ORF 24 and rubella nsp share the ALPDT motif.

There was a perfect molecular mimicry between Measles P protein strain Mvi/Victoria.AUS/12.99 (Bankamp B, 2008) and platelet gpIIb:

platelet gpIIb	**782-RGNSFP-787**
Measles P protein strain Mvi/Victoria.AUS/12.99	**199-RGNSFP-204**
The other Measles virus strains have	**RGNNFP**

CONCLUSION The perfect 100% molecular mimicry ALPDG, centered on a Proline, between HPV-61,-72,-81 L1 and platelet gpV raises the question of the etiology of the so-called "idiopathic" thrombocytopenic purpura. It is advocated to research HPV-61,-72,-81 as possible culprits, either by PCR or Metagenomics (*Johansson H, 2013*). HLA-DR3 may be a risk factor. The alimentation must be strictly controlled, avoiding in particular aspirin and alliaceous. The obligatory vaccination by **Measles** Mumps **Rubella** vaccine, associated with Zoster-**Varicella** vaccine (*Okazaki N, 2011*) and 3 doses of Gardasil or Gardasil 9 or Cervarix, may enhance further the auto-immune response against platelet gpV and induce autoimmune thrombocytopenia. Gardasil 9 is particularly worrying.

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